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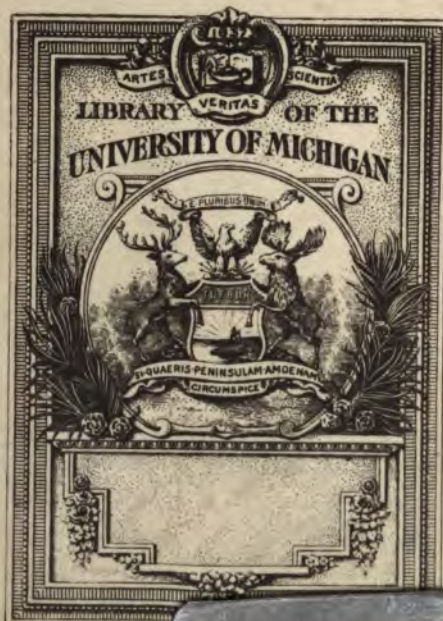
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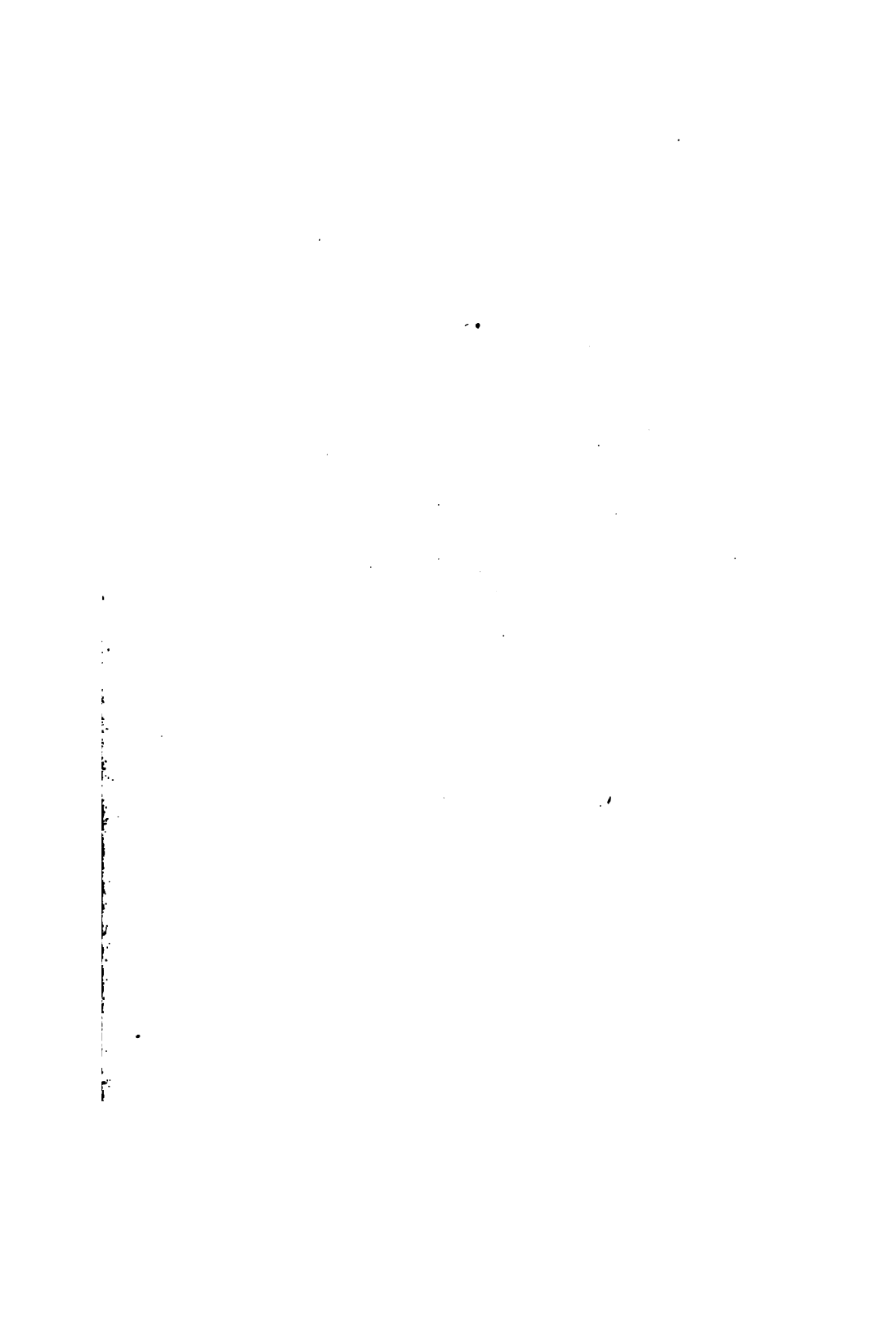
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HALF-YEARLY ABSTRACT
OF THE
MEDICAL SCIENCES.
JULY—DECEMBER,
1862.

LONDON:
SAVILL AND EDWARDS, PRINTERS, CHANDOS STREET,
COVENT GARDEN.

THE
HALF-YEARLY ABSTRACT
OF THE
MEDICAL SCIENCES:

BEING
A PRACTICAL AND ANALYTICAL DIGEST OF THE CONTENTS OF THE PRINCIPAL
BRITISH AND CONTINENTAL MEDICAL WORKS PUBLISHED
IN THE PRECEDING SIX MONTHS :

TOGETHER WITH A
SERIES OF CRITICAL REPORTS ON THE PROGRESS OF MEDICINE AND
THE COLLATERAL SCIENCES DURING THE SAME PERIOD.

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SCHOOL OF MEDICINE.

Apparatu nobis opus est, et rebus exquisitis undique et collectis, arcescit, comportatis.
CICERO.

VOL. XXXVI.

JULY—DECEMBER, 1862.

LONDON :
JOHN CHURCHILL & SONS, NEW BURLINGTON STREET.

EDINBURGH : MACLACHLAN AND CO. DUBLIN : FANNIN AND CO.

MDCCLXIII.

VOL. XXXVII. will appear on the 1st of July, 1863.

**Books, &c., for notice, to be sent as soon as published (carriage free)
to Mr. CHURCHILL, New Burlington Street; or to Dr. RADCLIFFE,
4, Henrietta Street, Cavendish Square.**

LIST OF BRITISH AND FOREIGN PERIODICALS REFERRED
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CONTENTS OF VOL. XXXVI.

PART I.

PRACTICAL MEDICINE, PATHOLOGY, & THERAPEUTICS.

SECT. I.—GENERAL QUESTIONS IN MEDICINE.

(a) Hygiene.

	PAGE
1. On Systematized Gymnastic Training for the Masses. <i>Lord Elcho</i>	1
2. On Over-exertion of the Arms as an Exciting Cause of Disease of the Heart. <i>Dr. Shann</i>	3
3. On the Use of Stimulants in the American Army. <i>Dr. Suckley</i>	5
4. Rules for Sea-Bathing. <i>Dr. M. Dutrouleau</i>	6
5. On Vice and Disease. <i>Dr. —</i>	8
6. On the Means of Protection from Small-Pox. <i>Dr. S. Henry Dickson</i>	10
7. Case of Syphilitic Disease appearing in two Healthy Children after Vaccination from a Syphilitic Child. <i>Dr. N. J. Hayden</i>	12
8. Is the Produce of diseased Animals unwholesome as Human Food? <i>Mr. John Gamgee</i>	13
9. Poisonous Partridges. <i>Mr. Taylor</i>	14
10. On Madeira and its Climates. <i>Dr. G. H. Brandt</i>	15

(b) Concerning Acute Diseases.

11. On the Specific Distinction of Typhus and Typhoid Fevers. <i>Dr. Peacock</i>	17
12. On the Disinfecting Treatment of Fever, Eruptive and Enteric. <i>Dr. John Hjaltelin</i>	17
13. On the Connexion between Typhus and Typhoid Fever. <i>Dr. John Hjaltelin</i>	20
14. On the Etiology of Typhoid Fever. <i>Dr. Ward</i>	21
15. History of an Outbreak of Fever at Over-Darwen, in the Autumn of 1861. <i>Dr. E. H. Greenhow</i>	23
16. An Epidemic of Typhoid Fever dependent upon the Use of Impure Water. <i>Dr. —</i>	25
17. On the Prevalence of Typhoid Fever in India. <i>Mr. J. L. Hanking and Mr. W. R. Cornish</i>	26
18. Notes on the Recent Prevalence of Yellow Fever in several of H.M.'s Ships of the West India Squadron upon their Arrival at Halifax. <i>Dr. Slogter</i>	27
19. An effectual and Simple Remedy for Scarlet Fever and Measles; with an Appendix of Cases. <i>Mr. Charles Witt</i>	29
20. On the Temperature, Urea, Chloride of Sodium, and Urinary Water in Scarlet Fever. <i>Dr. Sydney Ringer</i>	29
21. On the Treatment of Acute Rheumatism, considered with Regard to the Liability to Affections of the Heart under Different Remedies. <i>Dr. W. H. Dickinson</i>	32
22. On the Treatment of Acute Rheumatism. <i>Dr. Chambers</i>	34
23. On the Occurrence (hitherto unnoticed) of Malignant Pustule in England. <i>Dr. William Budd</i>	36
24. On the Connexion between Diphtheria and Croup. <i>Dr. Hillier</i>	39
25. Acute Anæmia of Drunkards. <i>M.M. Dumenel and G. Parchet</i>	40

(c) Concerning Chronic Diseases.

26. On the Use of Arsenic and Sesquicarbonate of Ammonia in Ague. <i>Dr. Edward Adamson</i>	41
27. On the Nitric Acid in Intermittent Fever. <i>Dr. William A. Hammond</i>	42
28. On the Connexion of Lead-impregnation with Gout and Rheumatism. <i>Dr. J. Warburton Egbie</i>	43
29. On the Co-existence of Tubercle and Cancer. <i>Dr. D. R. Haldane</i>	45
30. On Graves' Disease. <i>M. Trousseau</i>	48
31. A Remark on Hay-Fever. <i>Mr. W. White Cooper</i>	51
32. On the Use of Fucus Vesiculosus in Obesity. <i>Dr. Godefroy</i>	52

	PAGE
33. On the Hereditary Transmission of Tertiary Syphilis. <i>M. Ricord</i>	53
34. On the Successful Inoculation of Syphilitic Blood. <i>M. Feltzari</i>	57
35. Remarks on Beriberi. <i>Mr. E. D'Arcy Avesard</i>	59

SECT. II.—SPECIAL QUESTIONS IN MEDICINE.

(a) Concerning the Nervous System.

36. Two Cases of Delirium Tremens successfully Treated by the Iced Bath. <i>Dr. Sayre</i>	61
37. On Heat-Apoplexy. <i>Dr. H. Clark</i>	62
38. Recovery after Apoplexy of the Pons Varolii. <i>Dr. E. Brown-Séguard</i>	64
39. Parenchymatous Infarction of the Brain in Chronic and Acute Forms of Insanity. <i>Professor Albers</i>	65
40. Temperature of the Surface, especially of the Head, in the Insane. <i>Professor Albers</i>	66
41. On the Use of Nicotine in Tetanus, and in Cases of Poisoning from Strychnia. <i>Rev. Samuel Haughton</i>	66
42. Traumatic Tetanus treated by Chloride of Barium. <i>Dr. Gneocchi</i>	72
43. On a Proposed Remedy (a Species of Galium) for Epilepsy and other Spasmodic Affections. <i>Dr. Ogle</i>	72
44. Hiccough of Fifteen Days' Duration cured by Valerianate of Zinc. <i>Dr. Danet</i>	78
45. Intense Neuralgia relieved by Tincture of Aconite. <i>Dr. Habershon</i>	78
46. The Diagnosis of Partial Palsies of Sensation, especially of Paralysis of Touch. <i>Dr. Eigenbrodt</i>	80
47. On Paraplegia. <i>Dr. T. Gaillard Thomas</i>	80
48. Abscess of the Corpus Rhomboideum of the Cerebellum, with Muscular Rigidity. <i>Dr. Popham</i>	82
49. Peculiar Gelatinous Degeneration of the Cerebellar Membranes, &c. <i>Dr. Billroth</i>	84
50. On Diseases of the Cerebellum. <i>Dr. George Shearer</i>	84
51. On the Treatment of Chronic Hydrocephalus by Iodide of Potassium. <i>Dr. James Lister</i>	85
52. Clinical Researches upon Auscultation of the Head. <i>M. Henri Roger</i>	88
53. On the Pathology of the Pituitary Body. <i>Dr. Middleton Michel</i>	93
54. Case of Wound of the Spinal Cord. <i>Dr. E. Brown-Séguard</i>	94

(b) Concerning the Respiratory System.

55. Report on Pneumonia. <i>Dr. Austin Flint</i>	95
56. Oxygen Gas in the Treatment of Threatened Asphyxia in Croup. <i>Dr. Miquel</i>	101
57. On Certain Cases of Simulating Early Phthisis, and their Diagnosis by the Laryngoscope. <i>Dr. S. D. Bird</i>	102
58. On Arterial Murmurs in Incipient Phthisis. <i>Dr. W. S. Kirkes</i>	104
59. On the Diagnosis of Hæmoptysis. <i>Dr. Hyde Salter</i>	109
60. On Pleuritic Effusions, viewed in relation to Thoracentesis. <i>Dr. Henry Thorp</i>	113
61. Sudden Death in the course of Chronic Pleurisy. <i>M. Blachez</i>	115
62. Case of Asthma produced by Pressure on the Superior Vena Cava. <i>M. Piorry</i>	115
63. On the Supposed Therapeutical Action of the Excreta of Serpents in Certain Chest Affections. <i>Dr. E. P. Cotton</i>	116
64. Case of Hydatids of the Liver evacuated through the Lungs. <i>Mr. W. Hanbury</i>	118
65. Empyema from the Escape of Hydatids of the Liver into the Pleura. <i>Dr. Gull</i>	120
66. On Uncomplicated Hoarseness and the Sudden Hoarseness of Singers. <i>M. Jaccoud</i>	121
67. On a Percussion-thimble. <i>Dr. Radcliffe</i>	123

(c) Concerning the Circulatory System.

68. On the Pathology of Angina Pectoris. <i>M. —</i>	124
69. On the Influence of Tobacco-smoke in the Production of Angina Pectoris. <i>M. Beau</i>	126
70. Capillary Embolia with Fluid Fat, a Cause of Pyæmia. <i>Dr. E. Wagner</i>	127
71. On Crural Phlebitis, unconnected with Pregnancy or the Parturient State. <i>Dr. Ranking</i>	128
72. Two Cases of Extensive Arterial Obstructions from Separated Cardiac Vegetations. <i>Dr. Goodfellow</i>	131

(d) Concerning the Alimentary System.

73. On the Treatment of Peritonitis by the continued Application of Cold to the Abdomen. <i>M. Béhier</i>	131
74. On an Unusual Abnormal Condition of the Mucous Membrane of the Tongue and Cheeks. <i>Dr. J. Moore Neligan</i>	132
75. On Dyspepsia. <i>M. Pétrequin</i>	134

CONTENTS.

vii

	PAGE
76. Case of Aneurism of the Gastric Artery. <i>Mr. R. Donaldson</i>	135
77. A Remedy for Sea-Sickness. <i>Dr. Corrigan</i>	136
78. Hypertrophy of the Walls of the Stomach. <i>Dr. Castelain</i>	137
79. On the Use of Raw Meat in Obstinate Diarrhea. <i>M. Bouchut</i>	137
80. On the Good Effects of Charcoal Enemata in Dysentery. <i>Dr. —</i>	137
81. On Constipation. <i>M. Trousseau</i>	138
82. Hæmorrhage and Gangrene of the Intestine caused by Embolia of the Superior Mesenteric Artery	140
83. Description of Two New Tænioids in Man. <i>Dr. Weinland</i>	140
84. On Certain Points in the Pathology of the Liver. <i>Dr. Beale</i>	141
85. Two Recent Cases of Spontaneous Rupture of the Spleen. <i>Professor Rokitsansky</i>	143

(e) Concerning the Genito-Urinary System.

86. The Clinical Method of Quantitative Sugar-Testing in the Urine. <i>Dr. Roberts</i>	143
87. On the Saccharine Treatment of Diabetes Mellitus. <i>Dr. John Hughes</i>	146
88. The Treatment of Diabetes with Sugar. <i>M. Rigodin</i>	149
89. A Case of Chylous Urine successfully treated by Tincture of Muriate of Iron. <i>Mr. G. C. Dutt</i>	149
90. A Case of Chylous Urine. <i>Dr. Warburton Begbie</i>	150
91. The Symptoms of Atrophy of the Kidneys. <i>Dr. C. Mettenheimer</i>	152
92. Discharge of a portion of Kidney by the Urethra. <i>Mr. H. Taylor</i>	152
93. Enormous Diverticulum of the Bladder. <i>Drs. Warren and Greene</i>	153
94. On a Singular Lesion of the Urinary Bladder. <i>Dr. Packard</i>	154
95. Sterility in Man. <i>Dr. Hirtz</i>	155

(f) Concerning the Cutaneous System.

96. A fact as to the Contagion of Erysipelas. <i>Mr. —</i>	155
97. On Herpes, especially with Reference to its Connexion with Affections of the Nervous System. <i>Dr. Von Borensprung</i>	158
98. On Eczema. <i>Dr. C. Handfield Jones</i>	158
99. On Ringworm and Vegetable Parasites. <i>Dr. Hillier</i>	163
100. On the Influence of Change of Climate upon Lepra. <i>M. Guyon</i>	166
101. Singular Case of Loss of Hair. <i>Dr. R. M. Forsyth</i>	166
102. A Pomade to prevent the Fall of the Hair. <i>Dr. Dauvergne</i>	166
103. On Glycerole of Tar (Tar-plasma) in place of Tar-ointment, in Certain Skin Affections. <i>Mr. Henry B. Brady</i>	167

PART II.—SURGERY.

SECT. I.—GENERAL QUESTIONS IN SURGERY.

(a) Concerning Inflammation.

104. On the Subcutaneous Treatment of Boils and Carbuncles. <i>Mr. J. G. French</i>	168
105. On the Efficacy of Baths of Oxygen Gas in Senile Gangrene. <i>M. Laugier</i>	170
106. Successful Treatment of Pustula Maligna in Men and Animals. <i>M. Sankiewicz</i>	171

(b) Concerning Tumours.

107. On Tumours, or New Growths. <i>Dr. Wilks</i>	171
108. Contributions to the Pathology of Cancer. <i>Mr. W. M. Baker</i>	178
109. On the Value of Pulsation in the Diagnosis of Tumours. <i>Mr. Moore</i>	179
110. On Deceptive Fluctuation. <i>M. Ndlaton</i>	182
111. A Remarkable Case of Numerous Cutaneous Tumours. <i>Mr. M. C. Furnell</i>	183

(c) Concerning Wounds and Ulcers.

112. Cases of Complete Recovery from very Severe Incised Wounds. <i>Dr. Montgomery</i>	185
113. On Bullet-wound Exploration. <i>Dr. Rufus K. Browne</i>	186
114. Report on Syphilis, with Reference to the More Mixed and Unusual Forms of the Primary Symptoms. <i>Dr. Marston</i>	189
115. On the Distinction of Chancre from Syphilis. <i>Dr. Reder</i>	191

(d) Concerning Diseases and Injuries of Vessels.

116. Proposed Operation for the Removal of Embolla in Accessible Arteries. <i>Dr. Williams</i>	192
117. On the Treatment of Varicose Veins by a New and Simple Instrument. <i>Dr. James Morton</i>	193

(e) *Concerning Fractures and Dislocations.*

	PAGE
118. On Old Dislocations, and on their Reduction. <i>Mr. Brodhurst</i>	195
119. On Excision of some of the Smaller Joints. <i>Mr. Thomas Annandale</i>	195

(f) *Concerning Operations and Instruments.*

120. Statistics of Amputations in the Hospitals of Paris. <i>M. Trelat</i>	197
121. A New Transfusion Apparatus. <i>Dr. Hamilton</i>	198
122. On a New Fracture Apparatus. <i>Mr. C. Evans</i>	200
123. On the Substitution of Iron Wire for Thread and Silk as Ligature for Arteries. <i>Mr. Thomas Nunneley</i>	203
124. Oakum as a Substitute for Lint in Gun-shot and other Suppurating Wounds. <i>Dr. Lewis A. Sayre</i>	202
125. On Union by First Intention after Amputation. <i>M. Velpeau</i>	204

(g) *Concerning Anæsthetics.*

126. On Carbonic Acid as an Anæsthetic. <i>M. Ozanam</i>	205
127. On Local Anæsthesia from Cold, and its Applicability to the Severer Operations. <i>Dr. James Arnott</i>	205
128. A New Cause of Death under Chloroform. <i>Dr. G. W. Balfour</i>	207
129. Recent Deaths under Chloroform. <i>Mr. —</i>	207

SECT. II.—SPECIAL QUESTIONS IN SURGERY.

(a) *Concerning the Head and Neck.*

130. On Glaucomatous Affections, and their Treatment by Iridectomy. <i>Mr. Bowman</i>	209
131. On Sympathetic Inflammation of the Eyeball. <i>Mr. Haynes Walton</i>	214
132. Amaurosis consequent on Acute "Abscess" of the Antrum. <i>Mr. S. J. A. Salter</i>	217
133. Cases of Reflex (?) Amaurosis with Coloured Vision. <i>Dr. J. H. Jackson</i>	219
134. On the Absorption of Cataract by the frequent Evacuation of the Aqueous Humour. <i>Mr. J. G. Hildie</i>	220
135. On the operation for the "Solution" of Cataract. <i>Mr. Haynes Walton</i>	222
136. Embolia of the Arteria Centralis Retinæ. <i>Dr. Liebreich</i>	223
137. New Operation for Ectropion. <i>Dr. Fagenticcher</i>	224
138. On Epidemic Night-Blindness. <i>M. Boisseau</i>	225
139. Loss of an Eye from the Bite of a Leech. <i>Prof. Von Graefe</i>	228
140. On the Analogy between the so-called "Periodic" Inflammation of the Eyes in Horses, and Glaucoma in Human Beings. <i>MM. Van Biersvliet and J. Van Rooy</i>	227
141. On Obstructed Duct and Epiphora. <i>Mr. W. White Cooper</i>	228
142. On the Treatment of Chronic Obstruction of the Lacrymal Duct. <i>Mr. William Oliver Chalk</i>	229
143. On the use of Atropine-Paper for Ophthalmic Purposes. <i>Mr. Streetfield</i>	230
144. A Binocular Ophthalmoscope. <i>Mr. J. E. Lawrence</i>	232
145. Restoration of an Amputated Nose. <i>Dr. John Gason</i>	233
146. Bleeding at the Nose Checked by increasing the frequency of the Respiratory Movements. <i>M. Pierry</i>	234
147. A Disease of the Nose and Cranial Sinuses, prevalent in the Zillah Rohtuck, in the Panjab. <i>Mr. E. T. Lyons</i>	234
148. Root of a Canine Tooth lodged in the Lower Lip, and simulating a Cancerous Tumour. <i>Dr. Zandvick</i>	237
149. On the Employment of the Metallic Suture in the Operation for Hare-Lip. <i>M. Oscar Annauus</i>	237
150. New Operative Proceeding for the Cure of Hare-Lip. <i>M. Sedillot</i>	238
151. New Knives for Cleft-Palate. <i>Dr. P. Crampton Smyly</i>	238
152. On Enucleation of the Tonsils with the Finger. <i>M. Bernardino</i>	240
153. Remarks on Injections into the Middle Ear. <i>M. Triquet</i>	240
154. Difficulties and Dangers attending Catheterism of the Eustachian Tube. <i>M. Triquet</i>	243
155. On the Treatment of Ear-Ache. <i>Mr. —</i>	245
156. Necrosis and Extrusion of the Vestibule and Cochlea during Life. <i>Mr. Toynbee</i>	246
157. Puncture in the Neck, with a Wound of the Internal Jugular Vein. <i>Mr. John Adams</i>	246
158. Exfoliation of Part of the Body of a Cervical Vertebra with the Fibro-Cartilage. <i>Mr. Bickersteth</i>	249
159. Ossification of the Tracheæ, in Consequence of a Tube having been permanently kept in after Tracheotomy. <i>Dr. Furge</i>	250
160. A Tracheotomy-Tube dropped into the Left Bronchus. <i>Mr. Spence</i>	250

(b) *Concerning the Chest and Abdomen.*

	PAGE
161. Case of Ligature of the Sub-Clavian. <i>M. Torelli</i>	251
162. On Operation in Scirrhus Cancer of the Breast. <i>Mr. Paget</i>	251
163. On the Employment of Compression in Tumours of the Breast. <i>M. Broca</i>	254
164. Case of Rupture of the Pectoralis Major. <i>M. Letenneur</i>	255
165. Fracture of a Rib produced by a Sneeze. <i>M. D. F. Castella</i>	256
166. On the Treatment of Lateral Curvature of the Spine. <i>Mr. Wm. Adams</i>	256
167. On the Radical Cure of Exomphalos in the Adult. <i>Dr. Patrick H. Watson</i>	260
168. On Continued or Glover's Suture, in Wounds of the Abdomen and Intestines. <i>M. Reybard</i>	263
169. On the Treatment of Cut-and-Thrust Wounds of the Intestinal Canal. <i>Dr. B. Weber</i>	264
170. Case of Rupture of the Vena Cava Inferior. <i>Mr. George Harper</i>	266
171. Inversion of the Body in the Reduction of Hernia. <i>M. Priou</i>	267
172. A new Operation for Strangulated Hernia. <i>Dr. Pancoast</i>	268
173. On Fissura in Ano. <i>M. —</i>	269
174. On the Treatment of Fistula in Ano, during the Progress of Consumption. <i>M. Chassaignac</i>	270
175. On the Causes of Death following Lithotomy. <i>Mr. Henry Thompson</i>	272
176. An Analysis of 230 Cases of Lithotomy. <i>Mr. Thomas Bryant</i>	279
177. A New Operation for Lithotomy. <i>Mr. Fergusson</i>	282
178. Lithotomy in the Female by the Lateral Method. <i>Mr. George Buchanan</i>	282
179. Dilatation of Stricture in the Urethra, with a New Instrument. <i>Dr. J. H. Hobart Burge</i>	283
180. On an Undescribed Variety of Blennorrhœa of the Male Urethra. <i>M. Diday</i>	285
181. Case of Section of the Abdominal Wall for Rupture of the Bladder. <i>Dr. Walter</i>	285
182. Removal of a Piece of Catheter from the Female Bladder. <i>Dr. G. Buchanan</i>	286

(c) *Concerning the Upper Extremity.*

183. Case of Dislocation of the Ulna forwards without Fracture of the Olecranon. <i>M. Caussin</i>	287
184. Case of Malignant Pustule in the Arm. <i>Mr. Furneaux Jordan</i>	287
185. Aneurism of the Palmar Arch Treated by Chloride of Zinc. <i>M. Nélaton</i>	289

(d) *Concerning the Inferior Extremity.*

186. On the Treatment of Morbus Coxa. <i>M. Nélaton</i>	289
187. On a Case of Dislocation of the Head of the Thigh-bone into the Obturator Foramen, reduced with the Heel in the Perineum. <i>Mr. John Adams</i>	291
188. On Popliteal Aneurism Cured by Flexion. <i>M. Maunoir</i>	292
189. On Operations for the Cure of Varicocele and Varicose Veins. <i>Dr. M. H. Collis</i>	293
190. On the Cochîn-China Ulcer. <i>M. Rochard</i>	294

PART III.—MIDWIFERY.

MIDWIFERY AND DISEASES OF WOMEN AND CHILDREN.

(a) *Concerning Pregnancy and Parturition.*

191. The Principles and Practice of Obstetrics. <i>Dr. Gunning S. Bedford</i>	294
192. On the New Method of inducing Premature Labour at a Pre-determined Hour. <i>Dr. Robert Barnes</i>	294
193. The Obstetric Bag. <i>Dr. Barnes</i>	300
194. On the Mechanism of Labour. <i>Dr. Halakan</i>	302
195. On Turning in Cases of Disproportion. <i>Dr. Alfred H. M. McClintock</i>	305
196. On Narrow Pelvis. <i>Dr. Fnuicio</i>	306
197. Hemorrhage at the commencement of Labour from Hypertrophy and Eversion of the Os Uteri. <i>Dr. Myrtle</i>	307
198. Protracted Labour from Hypertrophy of the Fœtal Kidneys. <i>Dr. Key</i>	309
199. On Impracticable Labour from Occlusion of the Os Uteri. <i>M. Mattei</i>	310
200. Undescribed cause of Delay in Labour. <i>Dr. James Sidey</i>	311
201. Parturition without Pain. <i>Mr. James Townley</i>	312
202. Transfusion employed successfully in the Case of a newly-delivered Woman. <i>Dr. Weickert</i>	313
203. Illustrations of Puerperal Diseases. <i>Dr. E. Uvedale West</i>	314
204. Purulent Puerperal Peritonitis, caused by Paracentesis. <i>M. J. de Laplagne</i>	314
205. On the Treatment of Puerperal Fever by Sulphate of Quinine. <i>Dr. Cabanellas</i>	315

	PAGE
206. On the Internal Surface of the Uterus after Delivery. <i>Dr. J. Matthews Duncan</i>	316
207. Case of Unsuspected Pregnancy and Labour. <i>Dr. Tanner</i>	317
208. Case of Double Uterus, with Simultaneous Gestation. <i>Mr. Grace</i>	318
209. On the Diagnosis of the Sex of the Fetus. <i>Dr. Steinbach</i>	318
210. Circumscribed Tumefaction in the Sterno-Mastoid Muscle in New-born Infants. <i>Dr. Melchiori</i>	319
211. Statistics of Twins. <i>Dr. J. Spaeth</i>	319
212. Cases of Extraordinary Fecundity. <i>Dr. Warren</i>	321
(b) Concerning the Diseases of Women.	
213. On Uterine and Ovarian Inflammation; and on the Physiology and Diseases of Menstruation. <i>Dr. Tilt</i>	324
214. Case of Ovaritis. <i>Dr. Lamm</i>	325
215. On Gonorrhoeal Ovaritis. <i>Mr. Victor de Mérie</i>	326
216. On Spasmodic Contraction of the Sphincter of the Vagina. <i>MM. Debout and Michon</i>	330
217. On Vaginismus and its Treatment. <i>Dr. J. Marion Sims</i>	331
218. On Diphtheritic Inflammation of the Precident Uterus and Vagina. <i>Dr. J. Matthew S. Duncan</i>	334
219. The Vessels Concerned in the Production of Phlegmasia Dolens. <i>Dr. Tilbury Fox</i>	335
220. On the Treatment of Malposition of the Uterus. <i>Dr. Routh</i>	336
221. Inversion of the Uterus of Thirteen Years' Standing reduced by a Novel Method. <i>Dr. E. Noegggarath</i>	337
222. Case of Ovariectomy in a Pregnant Woman. <i>Mr. —</i>	338
223. On the Operation for Vesico-Vaginal Fistula. <i>Mr. I. Baker Brown</i>	340
224. A Case in which Air was Expelled from the Vagina. <i>Dr. George Harley</i>	343
225. On Hydatidiform Ovum. <i>Dr. Graily Hewitt</i>	344
226. On a New Description of Nipple Shield, and on the Treatment of Sore Nipples. <i>Dr. Cooper Ross</i>	345
227. On Injections in the Treatment of Uterine Diseases. <i>Mr. Robert Ellis</i>	346
228. On the Use of Medicated Pessaries in the Treatment of Uterine Diseases. <i>Dr. Tanner</i>	347
229. Inversion of the Uterus occurring spontaneously eight hours after Delivery. <i>Mr. Charles Cowan</i>	348
230. On Five Cases of Vaginal Closure. <i>Dr. J. Braxton Hicks</i>	349
231. Enormous development of Hydatids in the Omentum Simulating an Ovarian Tu- mour. <i>Dr. W. Newman</i>	351
(c) Concerning the Diseases of Infants.	
232. On the Causes of the Evils incident to Infant Dentition. <i>Mr. Clendon</i>	351
233. On the Value of the Expectant Treatment in the Pneumonia of Children. <i>M. Barthes</i>	354
234. On the Green Alvine Discharges of Infants. <i>M. Bouchut</i>	355
235. Incarcerated Intussusception in a Child successfully treated by Inflation. <i>Mr. Edmond Cousins</i>	356
236. Congenital Malformation of the Duodenum. <i>Dr. H. Wallmann</i>	358
237. On the Treatment of Imperforate Anus. <i>M. Guersant</i>	358
238. Case of Intra-Uterine Convulsions. <i>Dr. M. Leod</i>	359

HALF-YEARLY ABSTRACT

OF THE MEDICAL SCIENCES.

ETC.

PART I.

PRACTICAL MEDICINE, PATHOLOGY, & THERAPEUTICS.

SECT. I.—GENERAL QUESTIONS IN MEDICINE.

(A) HYGIENE.

ART. 1.—*On Systematized Gymnastic Training for the Masses.*

By LORD ELCHO.

(*Medical Times and Gazette*, July 12, 1862.)

THIS important subject, we hope, will soon receive the attention it deserves. In the meantime, the speech of Lord Elcho in the House of Commons, from which we take the following quotation, is an important movement in the right direction.

“The advantage of physical training had been acknowledged from the earliest times. In Greece and other ancient countries it was diligently practised. In the earlier periods of English history, too, schoolmasters were obliged by law to have bows and arrows in order to teach the youth to shoot, parishes were assessed for the purpose, and much attention was paid to those manly exercises which made the English archer able to defend his home, and to carry his arms successfully on the Continent of Europe. Roger Ascham, the tutor of Queen Elizabeth, spoke of shooting as a pastime ‘wholesome for the body and honest for the mind,’ and testified that some of ‘the best learned bishops’ of his time were skilled in the art. Though the spirit of those bygone times still survived, as might be seen from the fondness of the English people for various kinds of manly sports, yet it should be borne in mind that, as a system of national education, anything like attention to the physical training of youth did not exist. But it was especially with regard to the necessity of physical training for the pauper population of the

country that he wished to call the attention of the House. Through the energy and ability of Mr. Tufnel, the district inspector of the London Union, there had been established in the schools under his jurisdiction a system of military drill, of which from five to six thousand of the poor children in the neighbourhood of the metropolis were now deriving the benefit. He had himself visited a school in which children of the very lowest and most criminal class, many of them stunted in growth and naturally scrofulous, were being educated, and it was really astonishing to see what tidy, obedient, orderly, and respectable boys the military training to which they were subjected made them. He saw them go through their drill, which they did with the greatest precision, and he afterwards called out one of the boys, who commanded a company, and asked him to drill the remainder, and he did it admirably. Besides military drill, music was also taught to these boys, who, in consequence, were enabled on quitting school to obtain almost immediate employment as musicians in the army. Naval drill, too, was taught, and in the union-yard a mast, fully rigged, with sails, ropes, and spars, was erected, and the boys of the naval class were exercised in doing everything which sailor boys should do. They furled and unfurled the sails, stowed them away, and ran about the rigging like monkeys. The result was that these district boys from the pauper workhouses of London got higher wages when they went to sea than boys two years older coming from seaport towns. The evidence given before the Royal Commission on Education went to prove that the trained schoolboys were prompt and punctual as compared with the other boys, and it was calculated that if the system of drill prevailed in all the schools, one-fifth would be added to the value of the labour of the country. The boys, moreover, were rendered more apt, disciplined, and obedient. Now, it was objected to a scheme such as that which he proposed, that it would take away boys from the games of cricket and foot-ball; but in answer to that argument he would simply say, that the time which would be required to carry out the object which he had in view would not amount to more than one hour a-week, while in reply to the argument which was urged on the score of expense, he might observe, that the cost of drill in the district schools to which he had adverted, did not amount to more than 1*d.* a-week per head, and that sum might, he thought, very properly be spent by the ratepayers, or whoever else would have to pay it. He trusted, therefore, the House would not hesitate to stamp with its approval the system which he advocated, and begged to move,—“That the physical, moral, and economical advantages arising from a system of physical training have been clearly shown in evidence before the Royal Education Commission. That it is expedient, for the increase of the bodily as well as the mental aptitudes of children for civil, industrial, as well as for possible military service, that encouragement and aid should be given for the extension of the practice of systematized gymnastic training, and for teaching military and naval drill as now practised in the district half-time schools for orphan and destitute children, and in other schools for pauper children.”

ART. 2.—*On Over-exertion of the Arms as an Exciting Cause of Disease of the Heart.*

By Dr. SHANN, of York.

(*British Medical Journal*, September 7, 1862.)

We take the following remarks from an excellent paper on the diseases of artificers—a paper recording investigations like those of Thackray, and confirming for the most part the results arrived at by the older observer. Dr. Shann says:—

“The only trades which remain to be noticed are the ropemakers and the soapboilers; of these, however, only four of the former and two of the latter class came under notice; and I have, therefore, no means of judging of them as classes. The peculiarity to which I wish to direct attention as regards these six individuals is, that they are all the subjects of organic disease of the heart; and it appears to me that they afford an example of the influence which powerful and continuous over-exertion of the arms has as an exciting cause of disease of the heart. Next to acute rheumatism this would appear to be the most powerful exciting cause of this very prevalent and distressing disease; and I hope that it will repay the cost of attention, if you will allow me to illustrate this by some of the facts brought out in the tables before us.

“It is sufficient to look at a ropemaker when engaged in his business to see at once the powerful and continuous stress which is thrown on the muscles of the arms, especially those connected with the chest. The same holds true, to a much greater extent, of those employed in the manufacture of soap; the efforts made with the arms in using the rake, in puddling, or mixing the boiling constituents, is represented by the workmen as most severe and continuous, only inferior to that of the puddlers of molten iron in the process of smelting. In further illustration of this, we will briefly inquire into the nature of the occupations of those most frequently affected with heart-disease.

“At the top of the scale stand the smiths, whose occupation, it is well known, calls into play the most energetic use of the arms. This is not only the case with the blacksmiths, in the use of the large hammer, but holds equally, or in a higher degree, of the white and coach smiths, who have repeatedly spoken of the violent efforts they are called to make with both arms in certain screwing operations. The smiths appear to suffer only to a limited extent from acute rheumatism, the most ordinary exciting cause of heart-disease. This cause prevails to a considerably greater extent amongst the class which stands next on the list in order of liability—namely, the general labourers. These are, moreover, almost constantly called upon to put forth considerable efforts with their arms in lifting, shovelling, and wheeling, and various other kinds of heavy work.

“The shoemakers occupy the next place in the order of liability. These might, at first sight, appear to be rather exceptions to the rule, as not called upon ordinarily to make special efforts with the

arms ; but, as has been already shown, the making of strong country shoes does, in truth, demand considerable effort, and this during long continuous hours, disproportioned to the strength of young persons especially, of a class whose general vigour is not maintained by exercise or fresh air ; and the constrained position and very frequent pressure exerted on the abdominal viscera, diaphragm, and large vessels must not be overlooked. The shoemakers are not much subject to acute rheumatism, not a single case of this complaint having been met with amongst them ; the whole of the thirteen per cent., with which they are credited in the tables, being cases of the chronic form of rheumatism, less essentially allied to heart-disease.

"The out-door servants come next in order to the shoemakers in the ratio of liability to heart-disease. In their case, the predisposition to this affection may probably be attributable to the great prevalence amongst them of acute rheumatism, from which they suffer in a larger proportion than any other class. The curriers follow closely on the out-door servants in the same direction. Their occupation calls for greater muscular efforts with the arms in a constrained position, strong pressure being, at the same time, exerted on the abdominal viscera, diaphragm, and descending aorta. The curriers are much exposed to wet and cold ; at the same time no case of acute rheumatism was met with amongst them. When I say this of them, as in other cases, it is meant also that the heart affection could, in no case amongst them, be traced to rheumatism. It may throw further light on this question to view it from the opposite side ; and consider very briefly what classes are the least frequently affected with heart-disease. At the top of the list most favoured in this respect stand the in-door servants. These are exposed in very nearly the same proportion as the shoemakers to attacks of rheumatism, and in a higher degree than they to the acute form of it. The workers in confectionery come next in order of exemption ; after them, the glass-house workmen ; and then the tailors ; all of these being occupations in which violent exertion of the upper extremities is uncalled for. It would seem, then, from a careful examination of the tables, that generally, as regards each occupation, the tendency of those engaged therein to suffer from disease of the heart bears a direct proportion to the muscular effort thrown upon the arms in the course of employment. I should wish it to be understood of this, as of all generalizations drawn from so limited an amount of observations, that I merely bring them forward as probable, or approximations to the truth, which may eventually be established as certain, should they be confirmed by statistics in which tens of thousands take the place of hundreds, from which inductions are drawn in these tables : and it is with a view of inducing others to contribute their quota to so desirable an end, that I am led to bring before this Association these imperfect statements."

ART. 3.—*On the Use of Stimulants in the American Army.*

By Dr. SUCKLEY, Medical Director of the Federal Army.

An official order lately promulgated by Dr. Suckley runs thus:—
“1. The Medical Director has noticed during his visits at the various hospitals several patients in a dying condition who seemed to have been allowed to run down with but little attempt on the part of the medical officers to sustain or revive by the judicious and free use of alcoholic stimulus. 2. Among our patients there are many who, although not absolutely suffering from typhoid fever, are nevertheless afflicted with disorders upon which the typhoid poison has made a decided impression. 3. It is desired that, in future, patients in a failing condition will be *stimulated and fed* before they get too low; and it is ordered that no case be treated as hopeless until death has taken place. 4. Stimulus and nourishment in many cases are our only wise medicaments. Food is our best tonic, stimulus gives temporary strength for its digestion. Medical officers practising in the general hospitals at this dépôt are recommended to combine fluid food with stimulus whenever practicable. Egg-nogg, milk-punch, chicken-broth, mixed with wine or spirits, are all far better than raw spirits and water, except when a rapid and sudden effect is desired. 5. Perhaps there is no better test of a physician's ability than that afforded by his practice in the administration of stimulants. Nauseating, small spoonfuls frequently repeated, very soon become repulsive. Heroic doses at longer intervals are far better. For example: A small wineglass of milk-punch administered every fifteen or twenty minutes scarcely stimulates and but feebly revives. The patient is incessantly annoyed by the attention and officiousness of his nurse; his rest is broken, and he soon becomes disgusted with the very smell of the mixture. On the contrary, a tumblerful, as near as practicable, given say once in two hours, rouses the whole nervous system; the pulse comes up, a short sleep is gained, the patient is nourished and refreshed. 6. Milk-punch becoming distasteful, egg-nogg may be substituted, or any other palatable nourishing stimulus. 7. In conclusion, it is not only desired (as in paragraph 3) but strongly advised, that the physicians here employed will stimulate and nourish their patients before they run down too low; and not, as is frequently the case, follow an obvious indication only when the suffering patient is at the last gasp—thus justifying the remark once made by an old hospital patient, that he ‘never had seen a doctor give a patient brandy unless he was sure to die!’ All requisitions for stimulus to a reasonable amount made on the Medical Director will be duly honoured.”

Earnestly do we hope that the medical officers who require to be thus cautioned will have the sense and grace to obey the order of their wise medical commander.

ART. 4.—*Rules for Sea-Bathing.*

By Dr. M. DUTROULEAU, Inspector of the Sea-Bathing
Institution at Dieppe.

(*Gaz. Hebdomadaire de Med. et Chir.*; and *Journal of Pract. Med. and Surg.*,
August 20, 1862.)

The object of the memoir is to indicate with precision the rules for sea-bathing with the greatest possible benefit.

The first question that arises is that of the bathing dress. Mr. Dutrouleau observes that it would be desirable, if possible, to dispense with it altogether, and that it should consist of a loose garment of light texture, in order that the water should, during the entire bath, be in direct contact with the skin. The author also recommends that the head be uncovered, and that, for ladies, the hair should be confined in a net, which is far preferable to the oil-cloth cap adopted by French ladies in general. When not prevented by any peculiar circumstances, the patient should bathe in the morning, before the heat of the day. Should this not be practicable, the more favourable hour will be between three and five in the afternoon, which is likewise the proper time for a second bath, if the subject bathes twice in the day. This matter is further subservient to the meal-hours. In general, it is best to alter these as little as possible, even at the sea-side; but the peculiar susceptibility of the stomach must be consulted. Persons accustomed to take luncheon should continue to do so, if the digestive functions are regular; debilitated subjects, women and children especially, should make it a rule to eat between breakfast and dinner, and will find the habit conducive to more powerful reaction. The bath should be taken an hour and a half or two hours after a light breakfast. Persons unaccustomed to eat in the middle of the day, or who digest their food slowly, must bathe fasting. But if debilitated, they will find it safer to postpone the bath to the afternoon, four hours after the morning repast. Another point is, the expediency of bathing when the body is heated by exercise, or whether it should be allowed to cool before entering the water. A moment's reflection on the conditions most favourable to reaction will lead to the conclusion that the twofold mechanism by which it is induced, will work with greater energy if the body is warm at the time of the bath. It is, therefore, proper to take moderate exercise before bathing, and to allow the excitement to subside in part only before venturing into the sea.

The mode of entering into the water is a detail which, despite all prudential considerations, often leads to evil consequences, from apprehension or unconquerable antipathy to the first sensations of cold. As a principle, the entire body, including the head, should be as much as possible simultaneously immersed, in order that the concentration of vital power be at once general, prompt, and regular. The methods employed for the attainment of this object are various, but do not admit of all the measures too often indulged in to diminish the severity of the first unpleasant impression. To plunge

bodily into the water and to crouch in it is no hardship to a practised bather, but it is a more severe ordeal to nervous, delicate, or timorous individuals. Such persons should trust themselves entirely to the accompanying guide, and adopt one or other of the following procedures:—The first consists in standing in the water while several pailfuls are poured over the head; the bather should then rapidly enter the sea and squat down so as to be completely immersed. Certain forms of disease are especially benefited by this system, but it is repugnant to many persons. The other plan consists in being carried in by the guide, and horizontally plunged head-foremost beneath the wave. Mourgué denounces this as a cruel operation, and it would be open to the objection were it compulsorily enforced; but when it is performed with the full consent of the party concerned, and promptly and dexterously managed, it is far from unpleasant, and proves beneficial. These methods may be tempered so as to be made acceptable to the most nervous subjects; but slow and progressive immersion is contrary to every principle of the bath, may be productive of unpleasant symptoms, and must on no account be tolerated. Compulsion, on the other hand, should never be resorted to, and if, after several attempts, the subject cannot be induced to bathe in a safe and rational manner, it is best for him to give up all idea of sea-bathing.

It is of extreme importance not to stand motionless in the water with one half of the body in contact with the air. Persons who cannot swim should grasp the hands of the guide, or the ropes provided in some bathing establishments for the purpose; they should exercise, and periodically allow the waves to break upon the sides or shoulders, and occasionally lie on their backs, horizontally supported by the guide, and, best of all, learn to swim, carefully avoiding to exceed the proper duration of the bath. The latter is, perhaps, the most momentous of all the questions involved in the subject, and has the utmost influence on the results of each bath, and on the ultimate consequences of the treatment. The duration of the bath must depend upon the object to be attained, and should receive some modifications according to age, sex, constitution, and the nature of the disease of the patient. When powerful reaction is required, the bath should be short, last one or two minutes only, and at first consist merely in one or two immersions; its duration may be gradually extended to five and even ten minutes, when the system has become accustomed to the procedure, but under peculiar circumstances, and in warm latitudes only, can fifteen minutes be allowed. The mechanism of reaction fully explains the precept. Seasoned, healthy bathers may remain longer in the water: in the Mediterranean and at Arcachon, an hour is sometimes spent in the sea. Bathers are, moreover, warned by a sensation of chill that it is time to dress; a repetition of the shivering would entail nervous depression. All the bad effects of sea-bathing are attributable to the immersion being too protracted for the power of reaction of the body. We may further remark that the weather, the sea, and the health of the patients are liable to diurnal changes which may require corresponding modifications in the practice of bathing, and

that it would, therefore, be highly injudicious to lay down beforehand unyielding rules for the guidance of persons who repair to the seaside.

On leaving the water, the usual precautions consist in promptly returning to the tent or bathing machine, the body being at the same time covered with a loose flannel wrapper. Some persons derive benefit from affusion of sea-water over the head at the conclusion of the bath. The body should be promptly dried and well rubbed with a rough towel, the clothes be rapidly resumed, and a walk of a mile or two taken at once to promote reaction. When the refrigeration has been very considerable, and that warmth does not readily return, auxiliary measures may be resorted to with advantage—the warm foot-bath, for instance, which is very generally adopted at the various bathing towns on the Channel Coast. This appliance has been the object of much censure, and should not, perhaps, be resorted to as a rule; but when the feet are very cold, and shivering is present—a frequent occurrence after sea-bathing—it is, in Mr. Dutrouleau's opinion, the most efficacious method of restoring heat, and one of the best promoters of reaction. Persons who can dispense with it will do well to do so, but those who require the foot-bath may take it without fear. When general debility retards reaction, a glass of generous wine, or a warm cup of some aromatic infusion, are excellent auxiliaries; but pedestrian exercise is indispensable, and if the patient is debarred by general weakness from walking, he should be conveyed home and go to bed, or lie on a couch with a wrapper for an hour. Whatever means are adopted, reaction is the object which must be obtained.

ART. 5.—*On Vice and Disease.*

By Dr. —.

(*Lancet*, May 3, 1862.)

The remarks which follow are from the pen of the anonymous writer of "Medical Annotations" in the *Lancet*. They bring a very disagreeable fact into startling prominence, and show the absolute necessity of soon taking decided action with reference to it.

"The process by which medico-social questions travel out of the circle of medical discussion into that of general debate is slow and devious. There are many questions which have followed the same course as that now observable in the important matter of the diminution of the diseases consequent upon vice. When first intramural interment was opposed on medical grounds, the physical and sanitary dangers had to be demonstrated with tedious iteration before even the conviction of necessity could be forced on the public mind preliminary to reform. So with zymotic disease in its connexion with sewage-air and bad water. The demonstrations achieved by medical science have needed, and still need, to be pressed upon public men with incessant energy, in order to effect the necessary reforms. The enormous prevalence of diseases consequent upon vice has been repeatedly and urgently shown in medical circles, and

the aid of the authorities invoked. This great source of weakness to the military and civil population is now fortunately beginning, in its turn, to attract the attention of the public, and *The Times* is rendering good service by opening its columns to the facts of the case. As usual, the first step is, that the broadest and most incontrovertible truths are denied by those whose susceptibilities or interests are wounded. It is necessary to re-establish these conclusions, and to destroy the plea of 'not guilty' entered by the deputation from Aldershot which waited last week on Sir George Lewis, with the view of making things smooth. This deputation stated that only a small proportion of invalids from this cause were admitted into hospital. We will briefly state what are the real numbers. The annual ratio of men admitted to hospital for these diseases only, was, in 1859, in the infantry regiments, 399·4 per 1000; in the Dragoon Guards, 402; in the Royal Artillery, 571, and in the Military Train, 580 per 1000. Taking an average, there were 422 admissions into hospital from diseases arising from this cause amongst every 1000 men serving in the United Kingdom; and we may further state that the duration of cases of this class has been found to average 23·22 days, so that the inefficiency arising from this cause alone is equal to the permanent loss of the services, for the whole year, of 2417 men out of three regiments of those serving in this kingdom. Thus much as to the enormous prevalence of these diseases, which, it must be remembered, leave terrible constitutional traces long after they are nominally returned as cured.

"Now as to the means of prevention. First, it must be observed, that particular stations vary. The worst of all is Woolwich. The Ordnance Corps and Military Train show by far the highest average—570-80 per 1000. Aldershot exceeds what we have stated as the average, for the admissions run as high as 433 per 1000 of strength; but amongst the troops quartered in Ireland, the figures drop to 357 per 1000, and in the Household Cavalry to 120 per 1000. Here is already a notable improvement. But if we want a standard of higher health we must look abroad. In a paper read at the Royal Medical and Chirurgical Society last year by Mr. Acton, who may be regarded as, in a great measure, the author of the present most useful agitation, he showed that at the garrison of Brussels, only 11 men out of 3500 were laid up with these diseases; while, when he visited Windsor, there were 64 out of 600 Fusilier Guards in hospital from this cause. In London every fourth soldier has the most serious form of the disease; in Brussels only 1 in 56. It is contrary to our custom to adopt the sanitary regulations in regard to camp followers which are there succeeded by such happy results; but there are some immediate precautions which may be adopted, and which would be highly beneficial. The first is, the provision of hospitals for treatment of diseased women as in-patients. Their treatment, under such circumstances, as *out-patients* is little better than useless, for it by no means answers the purposes of segregation. But the easy means of retreat and cure would do much to relieve the present infected condition of the women. How terrible that is at the present moment may be judged from the fact which Mr.

Acton mentions, that out of 63 women examined lately for admission into a penitentiary, 59 were too seriously diseased. They have no interest in maintaining this diseased condition, and would gladly enter a fitting hospital for cure. The next important reform is the provision of means for personal cleanliness and ablution for the soldier; at present there is absolutely none. These are not new suggestions which we throw out; they are approved by the most competent military and civil surgeons. No time will, we hope, now be lost in carrying them into effect. Finally, the general elevation of pursuits and mental character of the soldier, the provision of rational occupation and means of amusement and self-education, such as Captain Jackson proposes, will have the effect of partially weaning the men from vice, and teaching them to control their passions."

ART. 6.—*On the Means of Protection from Small-Pox.*

By Dr. S. HENRY DICKSON, Professor of Practice of Medicine in Jefferson Medical College, Philadelphia.

(*American Quarterly Journal of Medical Science*, July, 1862.)

The chief object of this paper is to recommend the combined employment of vaccination and inoculation as the means of protection from small-pox. After discussing the subject at considerable length, and with much ability, Dr. Dickson proceeds:—

"Now, if the reader has given me his patient attention, he will, I am disposed to think, agree with me, that each of these two inestimable methods of protection is unfortunately imperfect, insufficient when employed alone, and undeserving of our full confidence. Regarding them as complements, each of the other, I would institute the employment of them both. Vaccine is the most certain in its action as a *modifier*. In all the tables we find the proportion of deaths in smallpox after vaccine set down as smaller than among those who are marked as 'having had smallpox.' Variola is, on the other hand, the more efficient preventive, or *protective*. By the resort to both of them, we obtain the double advantage of uniform palliation, and more certain protection, or obliteration of original susceptibility.

"Gregory tells us that 'smallpox in the unvaccinated is five times more fatal than it is to those who have previously undergone vaccination.' The latter should, therefore, precede the former. Revaccination, at distant intervals—better regular, of course, than irregular or capricious,—can have no advantage over the plan proposed. It is uncertain whether it ever does away the susceptibility to its own reception. Many series of experiments are required to decide this point, and I know of none but those made by Dr. Darrach, of this city, which have not been repeated. I think we have reason to doubt whether in all individuals any number of revaccinations would be securely protective; wisdom inculcates the course of greatest safety, which consists in following up vaccination by inoculation, especially if we repeat the latter to exhaustion of susceptibility. The experienced practitioner last quoted, and so often referred to as high

authority, goes on saying, 'I inoculated three of my own children, at the ages of twelve, thirteen, and fourteen, after successful vaccination in infancy, and the result was as follows: in two, local affection, without any fever or eruption. In the third case, there was local affection without fever, but with papular eruption on the seventh day, not advancing to vesicles. I firmly believe that these children are now and will remain through life unsusceptible of smallpox.' In this belief I fully accord with the writer, and entertain strongly the opinion that there is no other way of obtaining such complete security.

"Let me refer again to the 'report' of Dr. Jewell. 'In a former report,' says Dr. J., 'I have alluded to the inadequacy of voluntary provision to secure us from the ravages of smallpox, and I have elsewhere asserted that nothing less than a compulsory law, with a penalty attached for its violation, would prove an effectual barrier,' &c. What then shall be done?"

"There are two difficulties in the way of efficient action here. The first is the universal *vis inertiae*, opposed not only to all innovation, but to all movement of any kind. Yet if the medical profession were as a body to engage with earnestness and zeal in their duty, the great inert public might be roused, and much good be effected. But at best this would be only a partial success. I am satisfied that the inattention, indifference, and inaction of even the most enlightened communities as to this matter, are owing to their want of clear conviction, their imperfect trust in the security attainable by the measures urged; and this is the second and greatest difficulty before us. Nor can such incredulity be considered unreasonable, when we reflect upon the vacillation, the avowed scepticism, and open opposition of experts, and men of weight, influence, and knowledge, both in and out of the profession. Recollect that opportunity has never been given for the attainment of confidence, Chatham's 'plant of slow growth,' in any of the means brought to their view. Inoculation was from the first unpopular, and scouted by those who feared to try a new method, involving a reluctant familiarity with a dreaded enemy. When it had just outlived opposition, it was supplanted by vaccination, which promised so much, and was at the beginning so fortunate. But soon, very soon, this good fortune came to an end, and the exaggerated promises were found to be unfulfilled; and disappointed faith shrunk into doubt and disbelief. I do not despair of reviving the spirit of earnest inquiry and active experiment. The evil is so great in the present, and so menacing for the future, that if physicians will everywhere unite upon some system, we may reasonably hope to obtain from the constituted authorities the inauguration of some effective measures of coercion. A sense of the necessity of harmony among ourselves should lead to rational compromise and unity of effort. There are among us some who place little reliance upon the protective power of vaccine; there are some who dread the presence, in any form, of variola. None of us, so far as I am acquainted with my brethren and their opinions—none of us doubt the self-protective immunities of smallpox, or the happily palliative, modifying tendency of vaccine. Let us then with

energy, perseverance, and unanimity recommend to all civilized governments the combined employment of these two safeguards. Let us procure that it shall be ordained that every child shall undergo vaccination by some expert within a month after birth ; that as soon as the constitution shall have gone through its influence, inoculation with variolous virus shall be performed, and that this latter operation shall be repeated again and again at brief intervals, until all reasonable satisfaction has been attained of the entire extinction of the susceptibility to smallpox."

ART. 7.—*Case of Syphilitic Disease appearing in two Healthy Children after Vaccination from a Syphilitic Child.*

By Dr. N. J. HAYDON.

(*Medical Times and Gazette*, March 29, 1862.)

CASE.—In the summer of 1843 I was called, as the medical officer having charge of the sick poor of the parish and borough of Bodmin, Cornwall, to attend two young children of different families, and living about a quarter of a mile distant from each other. The children were each of them from nine to ten months old. The history of their illness being precisely similar, one description will apply to both. On the first introduction of the compulsory vaccination system, the guardians of the Bodmin Union entered into a contract with one medical man to perform the vaccinations for the whole Union. This gentleman, in the discharge of his duty of public vaccinator, attended at the appointed room in Bodmin, and on that particular day vaccinated those two children, taking lymph from the arm of a child he had vaccinated the preceding week ; he appeared (from the most careful personal investigation which I made of this matter at the time) to have vaccinated no other than those two children on the day in question, and to have taken lymph from no other child but the particular one alluded to. Between the second and third week after the vaccination had been performed, I first saw the children. They were literally covered with large phlyzacious pustules, the irritation was most intense, and, between rubbing and scratching, the head and nates were raw and ulcerated. No treatment had any avail, and both these poor children died a few days after I first saw them. Being at once impressed that the disease of these children was syphilitic, I made the most careful investigation I could into the whole matter. In both families there were other older children perfectly healthy. The parents, in both cases, were labourers, of most healthy appearance and of good character ; were then, most certainly, and I have no cause to doubt ever had been, free from syphilitic taint. The respective mothers of both children carried their infants themselves to be vaccinated ; they saw the operation performed, and they saw the child from whom the lymph was taken ; they told me the name of the child, and where it lived. As medical officer of the borough of Bodmin, this child and its mother were both known to me. The mother had been, and, in fact, then was, on the town, and I had attended her for syphilis. At that very time she was diseased. I examined her child ; it had, as far as I could see, no primary syphilitic sores, but it had numerous syphilitic eruptions about its body, pustules about its nates and trunk, and copper-coloured leprous spots. The child was between two and three years old, and under treatment it recovered. The public vaccinator lived at a distance from Bodmin, and could not have known the character of the parties from whom he took the lymph.

ART. 8.—*Is the Produce of diseased Animals unwholesome as Human Food?*

By Mr. JOHN GAMGEE, Principal of the New Veterinary College, Edinburgh.

(*Edinburgh Veterinary Review*, and *Glasgow Medical Journal*, July, 1862.)

This paper, of which we furnish a short abstract, was read at the Metropolitan Association of Medical Officers of Health :—

After a few introductory remarks as to the unsatisfactory state of our knowledge in reference to the effects of animal food, which he compared to the state of knowledge in relation to the effects of impure air and water twenty-five or fifty years ago, the author classified the sources of impurity known to affect animal food into five divisions. 1. Cadaveric venom and animal poisons of undetermined nature developed spontaneously in health or disease. A poison of this nature exists in animals goaded and hunted until they are infuriated. The form of disease induced by eating the flesh of an over-driven ox is violent dysentery with febrile excitement. A similar poison appears generated by a protracted parturition; and the flesh of cows dying in labour should on no account be eaten. 2. Animal poisons well known from their effects in inducing specific contagious diseases. *Anthrax* is the disease which is best known as generating such a poison. The warmer the climate, the more deadly is anthrax; in our own country the disease is seen, but is rarely, and then in hot weather, attended with the development of the anthrax poison. The *braxy* in sheep, the *black quarter*, *quarter coil*, *quarter garget*, and *black leg* are other names for this disease. It is the terrible virulence of the anthrax poison abroad that has led to the excellent organization of slaughter-houses and the appointment of qualified professional inspectors. The milk of animals affected with anthrax appears in some instances to have caused diarrhoea. *Contagious typhus fever* is a disease which has not reached our country, owing to the vigilance of the Prussian and Austrian Governments. It does not appear that the flesh is rendered poisonous to man by this disease. The milk has produced alarming symptoms in man and dogs. *Epizootic aphthæ*, which has been so rife in London for some time past, and known by dairymen as the hoof and tongue disease, is not often fatal, except from the violence of irritative fever, which no doubt deteriorates the flesh. The milk, if taken quite fresh and undiluted, has been proved to cause feverish symptoms, and a vesicular eruption in the mouth. It has proved fatal to calves and pigs. *Epizootic pleuro-pneumonia*, which has also been so fatal in England, appears confined to the ox tribe. The author believes it to be exclusively contagious; but the losses it induces are greatest when animals are kept in defiance of sanitary rules. The milk derived from animals that die of this disease, though deteriorated in quality, cannot be said to be poisonous. Mr. Gamgee considers that when a fat bullock or other well-conditioned animal is taken with the disease, it should be slaughtered at once,

and the flesh allowed to be sold at a reduced price. 3. Organic poisons the result of decomposition. The flesh of diseased animals putrefies rapidly. 4. Mineral and vegetable poisons absorbed into the system of animals. *Tartar emetic* may be given in very large doses, many ounces daily, to oxen, and would prove very pernicious. Cattle and sheep may eat with impunity many narcotic vegetables which render their flesh and milk poisonous. 5. Parasitic animals and vegetables inducing disease in man. The cysticercus in measly pork causing tapeworm, and animals suffering from ringworm giving rise to eruptions and boils, come under this category.

ART. 9.—*Poisonous Partridges.*

By MR. TAYLOR, of Romsey, and others.

(*Medical Times and Gazette*, and *Pharmaceutical Journal*, October, 1862.)

In the *Times* of Wednesday, September 10, is a letter from Mr. E. Taylor, of Romsey, giving an account of some cases of poisoning from eating Canadian partridges. When the snow is on the ground these birds, it appears, are forced to feed on certain berries, which renders their flesh unsafe for food, but what these berries are is not stated. Mr. Taylor writes:—

“On the 8th of last March I was sent for hurriedly to a lady who was described as dying. I found her cold, insensible, and pulseless. She had been sick while lying upon her back. I forced her to swallow a wineglassful of brandy, and took other measures for some hours to stimulate and recover the warmth and circulation, and partially succeeded. She remained, however, insensible, and almost in a hopeless state for many hours, at last gradually recovering; but for several weeks suffered from ill health in many ways. On regaining her consciousness, and during the whole of the following day, she experienced a most uncomfortable sensation of ‘acute thrilling,’ especially on the slightest movement of the muscles of the face. I suspected poison in this case, but I could not recognise the symptoms of any one poison in particular. I found that the lady had dined about two hours and a half previously to the attack, and that she had eaten part of one of these Canadian partridges. The birds were perfectly fresh, having been packed in ice. Five days after this occurrence I was sent for hurriedly to see a younger lady, the wife of a gentleman who had had a case of partridges sent him from Canada, and who had presented a brace of them to my first patient. I found this lady cold and pulseless, and feeling paralysed, with ‘a peculiarly horrid thrilling sensation all over her,’ and a very painful sense of constriction in her throat. She had eaten for supper heartily of one of these Canadian partridges, and within a few minutes felt ill as I have described. I gave her mustard emetics, and afterwards brandy in large quantities; and gradually, after many hours of intense suffering, the lady recovered, and in a few days regained her usual good health. On the night of her extreme illness, while sitting in the bedroom, I noticed a young cat there, which, in attempting to move, fell over on its side, and upon lifting it up I found the hinder legs

paralysed, so as to be quite useless; and upon the poor thing attempting to walk or leap, it fell helplessly on its side again. The lady told me that during supper she had thrown to this cat some bits of the partridge. It was found that the poor thing had been thoroughly sick. The cat continued to be paralysed, but gradually recovered in a few days, no doubt saved by the natural act of vomiting. My impression is, that the younger lady might have recovered without help; but she was, I am certain, very materially benefited by induced sickness and by large doses of brandy. The elder lady, I feel sure, would have died, unless prompt and continued strong measures had been taken to keep the flickering and almost exhausted flame of life burning."

It has long been known that the poisonous principles of certain plants retain their properties after having passed through the digestive laboratory, and become incorporated in the tissues or secretions. Modern chemistry, by showing that the vegetable alkaloids pass through the animal body undecomposed, and may be detected under favourable circumstances, has only confirmed a very common observation. The flesh of hares which have browsed on the *Rhododendron chrysanthemum*, and that of young pheasants after feeding on the buds and shoots of the *Kalmia latifolia*, acquire deleterious properties. So also the milk and flesh of cattle grazing on some of the mountain herbage of South America have been found poisonous. Some time ago several persons near Toulouse were poisoned by a dish of snails, which had been fattened on the leaves and shoots of *Coriaria myrtifolia*. In all these instances the vegetable principles seem to be incapable of affecting the animals themselves. The poisonous effects of honey obtained by bees from certain species of *Kalmia*, *Azalea*, and *Rhododendron* are also well known. It is said that the plague mentioned by Xenophon, from which the 10,000 Greeks suffered in their retreat, was produced by eating honey collected from the *Azalea Pontica*—the "Ægolethron" of the ancients. The effects produced by such honey are of a narcotico-irritant character, and in some instances have been of long duration. Even the mead made from it is highly poisonous.

The question is still unsettled, and after all a different explanation may be necessary. Thus, in the *Times* of Saturday, September 20, Mr. Grantley F. Berkeley, in a letter to the editor, suggests that the birds in question may have been taken by poison, and that *strychnine* may have been adopted as the method of death.

ART. 10.—On *Madeira and its Climates*.

By Dr. G. H. BRANDT.

(*Lancet*, June 21, 1862.)

THE points insisted upon in the following quotation are not sufficiently known to persons resorting to Madeira for the sake of their health, and in many cases this ignorance is shared by those who have suggested this change of climate as a desirable remedy. Dr. Brandt says:—

"The most important feature of Madeira is that it possesses every kind of climate that invalids suffering from pulmonary diseases can require; this is chiefly owing to its peculiar geographical situation and formation. The fact of the greater portion of invalids residing in the centre of the town, where the climate is always the same, reminds us of those who believe in a panacea which is to cure all diseases. Can one single therapeutic agent (however good it may be) affect in the same way individuals from different countries, with different constitutions, temperaments, and idiosyncrasies? It is absurd to suppose so, and yet it is what is constantly done, year after year, by those who resort to Madeira.

"The majestic amphitheatre of Funchal is naturally divided into three districts—east, central, and west; the south being formed by the bay, and the north by hills of different heights, varying between one hundred and two thousand feet, beyond which are mountains of much greater altitude. The east is the most sheltered part of Funchal, being protected from the north and north-east winds by the surrounding mountains. The centre, owing to numerous watercourses constantly running in every direction, and sometimes overflowing, constitutes the dampest district. The west is dry and warm. To convince us still more of the varieties of climate within a small range, we have only to glance at the particular vegetation in each of these districts, and we shall find that those vegetables which require a wet soil and damp atmosphere (such as the banana, inhame, loquat, &c.) thrive more luxuriantly in the central district. The western district produces the finest wine, owing to its particularly dry soil, and the perfect maturity at which the grape arrives. The sugar-cane, which grows well in the other districts, ripens at an earlier period here; its watery parts are thrown out earlier, and it is sooner fit for making sugar.

"As regards the effect of two climates on certain invalids, very striking instances have fallen under our observation—one in particular, which we had the opportunity of seeing last winter. The individual was of an extremely delicate constitution and of a nervous temperament, who resided during the early part of the winter in the central district. During that time the powers were prostrated; the functions of the liver and intestines were torpid, as also the circulation of the blood; no appetite, and no inclination for exercise; the daily operation of the toilet was almost too great an exertion; and although the temperature was high, still a sensation of cold was always felt. A change was absolutely necessary, and the invalid was recommended to go to the western district, at a higher elevation. The effect was almost instantaneous, for in the space of a fortnight the liver and intestines acted regularly, the appetite returned, exercise could be taken without any exertion, and although the temperature was five or six degrees lower, the sensation of cold was not felt; strength returned, and a new life began.

"Observations of this kind might repeatedly be made if the invalid would go to the climate most suited to his case, and not, like so many a slave to fashion, choose situations most convenient for amusement and pleasure."

(B) CONCERNING ACUTE DISEASES.

ART. 11.—*On the Specific Distinction of Typhus and Typhoid Fevers.*

By Dr. PEACOCK, Physician to St. Thomas's Hospital, &c.

(Lancet, August 9, 1862.)

Speaking upon this subject in a clinical lecture on the recent epidemic of fever, Dr. Peacock says:—

“In my last lecture I briefly described the most striking features of the cases of typhus and typhoid fever which we have recently had under treatment, and showed that they corresponded in general with the description which I had previously given of those diseases. It remains for me to state how far my recent experience confirms or opposes the views previously expressed, that the two diseases are specifically distinct. As the two affections prevailed coincidently, it might naturally have been expected that, if not distinct, cases would have occurred which did not present the characteristic features of either form, but rather partook of some of those of each, so as to present an intermediate character. Such, however, was not the case. Each disease, while presenting certain modifications, yet retained sufficiently distinctly its characters to admit of an unhesitating opinion as to its nature; and after more extended observation, I do not hesitate to repeat the expression of my opinion, that typhus and typhoid fevers are specifically distinct. I have met with no instances in which, in a case of fever characterized during life by the presence of a typhous or mulberry rash on the skin, intestinal disease has been detected after death; or in which, after the general features of typhoid had occurred during life, the existence of more or less intestinal disease has not been detected after death. The two affections very closely approximate; typhus, as has been shown, may be attended by symptoms of intestinal disorder, and in typhoid such symptoms may be absent; typhus may be free from symptoms of cerebral disturbance, and typhoid may be attended by such symptoms to a marked extent; but the two affections are nevertheless clearly distinguishable if carefully studied, and no case has occurred in which I have failed to effect a diagnosis, when the patient has been under observation for a sufficient length of time, or in which the subsequent course of the case has shown the diagnosis to have been incorrect.”

ART. 12.—*On the Disinfecting Treatment of Fever, Eruptive and Enteric.*

By Dr. JOHN HJALTTELIN, Inspecting Medical Officer of Iceland.

(Edinburgh Medical Journal, September, 1862.)

During 1859 and 1860, Iceland was ravaged by a dreadful epidemic of fever, and Dr. Hjaltelin had abundant opportunities of

putting his mode of treatment to the test of experience. Out of a population of 10,000 inhabitants, indeed, no less than 900 cases of fever were treated in this manner, the indications being:—

1st. To prevent overcrowding in the farm-huts and cabins as far as possible, where this in any way could be done.

2nd. To have the windows thrown open as often as the season would allow it, and make holes for ventilation where this could be most effectually done for purifying the air.

3rd. To destroy every offensive odour about the sick, and even the smell of the sickness itself.

4th. To introduce cleanliness in every respect.

5th. To clean the bowels of the patients as soon as possible in an effective and perfect manner.

6th. To destroy instantly the odour of evacuations from the patients.

7th. To use internally disinfecting medicines in a bold and consequent manner.

8th. To support the strength of the patients by easily digestible but nourishing foods.

"The first indication could very seldom be fulfilled, but it was done whenever possible. The second indication was for the most part tolerably executed, especially when the people got afraid of the contagion, and therefore dared not shut their windows, but followed for the most my advice in opening them.

"The third indication was, after the lapse of some time, when the people had seen the good effect of it, boldly executed; and the remedies applied to this purpose were the aforesaid disinfecting compounds,—viz., chlorine-gas, Sir William Burnett's chloride of zinc solution, iodoform, and charcoal.

"The fourth indication met with many obstacles, and could seldom, on account of bad habits or poverty, be executed as it ought to have been, or would have been, if cleanliness were a more common virtue in this country.

"The fifth indication was fulfilled by administering a full dose of calomel, sulphate of magnesia, or sulphate of soda, all in large and repeated doses, according to age and other circumstances. The calomel was generally given in a dose of ten to twenty grains every day or every second day, until the fetid odour of the dejections was gone. As the effect of this treatment, I may mention the lessened tenderness in the right iliac region and in the whole abdomen, lowering of the pulse, diminished headache, and more clear consciousness of the mind, when from the beginning there had been stupor or coma. In some cases sulphate of magnesia was given in a dose of a half or one ounce, until I was pretty sure of the bowels being well cleaned, and all bad odour of the evacuations had disappeared.

"In order to execute the sixth indication, sulphate of iron was generally put into the water-closets before they were used; but, in some cases, chloride of lime was used for the same purpose. By these disinfecting compounds no odour of the dejections could be felt, although the patients had very large and noxious-smelling

evacuations. I think that every one who knows the small and dirty Icelandic huts will agree with me that this is a quite indispensable proceeding to purify the air, where many patients are crowded together in small rooms. This method seldom failed to produce a happy effect upon the patients. The seventh indication was executed in several manners. If the patients were supposed to have strong and healthy respiratory systems, they were made to inhale iodoform or chlorine gas mixed with the air. The former remedy was most frequently used, and the good effect of it (according to my experience) is undeniable. It was in some instances given internally, dissolved in ether, and seemed often to produce a well-marked relief, and especially it was observed to check coma and delirium. The chloride of lime was never used internally, but the patients were often made to inhale the vapour of a concentrated solution of chloride of lime, which was managed in this manner:—Linen strips were dipped in the solution, and hung up to dry by the bedside, which caused a continuous chlorine gas exhalation in the room. By patients with weak and irritable lungs the iodoform was always preferred to the chlorine gas.

“The eighth indication, namely, to support the strength of the patients, was fulfilled by nourishing food and decoction of bark; and this was sometimes recurred to in the third stage of the fever, in order to prevent death from exhaustion. It seems to me that many physicians are too much afraid of using nourishing diet in typhus fever, forgetting the great loss of nitrogenous compounds which this sickness, by the large excretion of urea, produces. I have seen many typhus patients in this country, who, as soon as they were able, took very nourishing food, which would never be allowed in the hospitals of Europe, recover speedily; and, comparing this fact with the languishing and protracted recovery in the hospitals, I conclude that nourishing food in the latter stages of this fever is quite indispensable.

“As to the result of my treatment, I am obliged to make some remarks, and in so doing it is necessary to mention the ravages of the typhus fever in our country during the years 1859 and 1860. In the northern part of this island, and on the western shores, a good many patients fell victims to it; so that in some parishes the mortality was no less than 1 in 16, or even 1 in 14, of the whole population. In some parishes every tenth inhabitant died from the sickness; and in many places, where no medical aid could be obtained, the mortality of the whole population for the year 1860 was 1 in 15 or 16. At the same time the mortality for the town of Reykjavik was only 1 in 29, and for the adjacent parish 1 in 27. Being the whole time obliged to go from one hut to another, and besides to make many visits in the neighbouring country, it was impossible for me to calculate the number of my patients in a perfect and accurate manner. I only know this (as aforesaid), that during the years 1858-61 I have had a number of not less than 900 cases of typhus and typhoid fever under my treatment, and that out of this number I have lost no more than 30 patients from this disease. In a neighbouring parish the number of the patients was

95, and out of this number only two died. I am, therefore, inclined to believe that if my disinfecting treatment had been carried on under favourable circumstances, the result might, most probably, have been still more conspicuous."

ART. 13.—*On the Connexion between Typhus and Typhoid Fever.*

By Dr. JOHN HJALTTELIN.

(*Edinburgh Medical Journal*, September, 1862.)

Dr. Hjaltelin is convinced of the identity of the typhus and typhoid poison. At any rate, he speaks in the following manner in the excellent paper on Fever in Iceland, to which reference was made in the preceding article:—

"If we look closely into the predominant symptoms of both diseases, we shall find these symptoms are very like, and have only to suppose that the as yet unknown organic poison acts in typhus especially upon the brain, the lungs, and the skin, while in the typhoid fever it has acted more upon the mucous membrane of the ileum and cæcum, from which there arises an hyperemic state in the Peyer's glands, many times terminating in inflammation, suppuration, and gangrene. That this is really so I have been convinced of in some cases of our typhus, where the cutaneous exanthema did not make its appearance on the fourth or fifth day. In such cases I generally found more or less pain by pressure of the hand in the right iliac region, followed by diarrhœa, or with ochre-yellow pea-soup-like dejections. In some of these cases exanthematic eruptions were seen on the breast at the end of the fifth day, but it seldom then made its appearance on the extremities.

"Besides the aforesaid, one symptom convinced me of the identity of the typhus and typhoid poison, and this was the truly specific odour exhaled from the patients in both these diseases. I have read that this same odour has been remarked by the genial medical writer, Dr. Hilario Barlow; for he says, in his 'Manual of the Practice of Medicine,' page 706, 'Besides this, there is an odour peculiar to different fevers, as typhus, scarlatina, and small-pox.' The odour of small-pox is very well known, and has even been adduced amongst the most characteristic signs of this disease by the old medical writers. I still remember that I, as a young medical student at Copenhagen, was obliged to remark, in every journal, of those affected with small-pox, whether there was a 'halitus variolosus' or not, in order to be able to give a right diagnosis of the fever before the eruption. The odour of small-pox is very like the odour of salted herrings; and the odours of scarlatina, the measles, and the Asiatic cholera are so specific, that we must wonder they should not already have been well described and put down in our handbooks of medicine as one of the most characteristic diagnostic symptoms of these diseases. I think Dr. Hilario Barlow quite right in advising the young medical students to cultivate all their senses, and especially the sense of smell; for had this been

done in an exact manner, and with due precautions, there could be little doubt about the identity of typhus and typhoid poison. I know very well that this is a more easy trial in small Icelandic cottages than in the large and lofty wards, and it is on this account that I, by the circumstances in our country, have been more able to do so than my medical brethren in foreign countries. The odour of the typhus poison is so decided, that it is well known even among the peasants in this country, and they have given it the name of typhus odour, or of 'Sóttarlykt,' which means the 'fever odour.' When people come to ask my visit to one who is seized with typhus, they generally say, 'We wish very much you would come to see the patient, for he is very bad off, and there is a strong fever odour about him.' Sometimes they said, 'Our patient is not very sick, but we are afraid of him, because there is a strong fever odour about him. We wish, therefore, very much that you would come and see him, because it is most likely the typhus, and we might also be sick by the contagion.' It is very natural that in the small Icelandic houses (where there generally is allotted only about one hundred cubic feet of air for each individual) the typhus odour must be very strong and penetrating, and so it really was, for it might somewhere be called insupportable. I now tried if I could make out any difference between the odour of eruptive typhus and that of the enteric typhus, but, after many repeated trials, I came to the same conclusion, namely, that I could not find out any real difference. The odour was, of course, strongest in the overcrowded dwellings; but it was strong enough to be clearly perceived where two or three patients were in the same room of the larger ones. When the rooms were well ventilated, the odour would be weaker, but it never quite ceased unless strong and effective disinfecting compounds were used: it was, therefore, very often necessary to continue them for a longer time, day and night, before the odour was wholly destroyed."

ART. 14.—*On the Etiology of Typhoid Fever.*

By Dr. WARD, Physician to the Seaman's Hospital,
Dreadnought.

(*Medical Times and Gazette*, May 24, 1862.)

In some clinical remarks on the cases of fever treated on board the *Dreadnought* during the last few months, Dr. Ward speaks on the subject of etiology. Taking the first 50, in which there was a clear history of the development of the disease, he found the following results:—In only three had it been developed in ships that had come from off a long voyage, say of several weeks, or two or three months. In the other 47 cases, the disease had been developed either while the ships were in harbour at some port of the coast of England, or adjacent countries, and had shown itself on the passage to London, or it had been generated in the ships while lying in the river, especially in the part known as "the Pool," or in one or other of the docks belonging to the port of London, or in the

portion of the metropolis frequented by sailors. On reference to the entry-books, Dr. Ward had found that quite as many, if not more, sailors were admitted as patients from ships that had come from off long voyages, as from those which had furnished the disease in question. Some of the ships engaged in traffic to distant countries had undoubtedly advantages in the way of superior accommodation; but in the majority there was overcrowding in the cabins at night, and unhealthy animal emanations as a consequence. One might, therefore, quite logically eliminate such effluvia, at least in these cases, as an exciting cause of the disease. On the other hand, the facts, that this fever is not most prevalent in the hot, dry season of the year when sewage emanations are most offensive, that men who work in sewers are not especially victims of it, and that the offensive state of the Thames, which was said to be due to the sewage influence, did not generate it, enable us to eliminate drain effluvia also as the peculiar exciting cause. From the circumstance that the ports noticed, the east coast of England, the river, the pool, and the docks, had also been prolific sources of the cases of intermittent fever introduced into the *Dreadnought*, Dr. Ward was led to the conclusion that the specific exciting poison of enteric fever consisted in some atmospheric influence analogous to—not, of course, identical with—that which induces ague and remittent fevers. This view was strengthened by considering the analogies which the fever in question presents with the intermittent and remittent types:—

1. It has a tendency to relapse.
2. It falls peculiarly upon the abdominal viscera, the ileum, the liver, and the spleen.
3. It prevails most at the season which most favours the development of remittent fever, viz., the close and fall of the year.
4. It appears to be fomented by similar atmospheric conditions, as regards hygrometric state, temperature, &c.

Dr. Ward had seldom seen so many cases of irregular ague in London as during the late prevalence in it of enteric fever.

That this fever could not be always traced to such causes as effluvia from decomposing animal matter, sewer emanations, &c., seemed to be confirmed by the irregular way in which it shows itself,—at one time, and merely in isolated cases, in houses with defective sanitary arrangements, at another, in those the arrangements of which seemed to be in every respect complete. The conclusion might, therefore, be fairly arrived at, that the specific exciting cause of typhoid fever was to be sought in some atmospheric malarious influence, and that defective sewerage, primarily and prominently, emanations from decomposing animal matter, in common with other physical and mental influences which depress the vital powers, are but powerful predisposing causes. Coupling the isolated manner in which this fever showed itself amongst many individuals exposed to the same exciting cause, with the proofs afforded by German pathologists of its analogy to certain blood diseases, it became a question whether some peculiarity of constitution might not also be included among the predisposing causes.

ART. 15.—*History of an Outbreak of Fever at Over-Darwen, in the Autumn of 1861.*

By Dr. E. H. GREENHOW.

(*Proceedings of the Epidemiological Society, April 7, 1862.*)

Dr. Greenhow commences by observing that, although the etiology of continued fever has engaged the attention of so many able inquirers of late years, it must still be regarded as unsettled, seeing that such various views are entertained on the subject by observers of equal ability and honesty of purpose. The time had not yet arrived to dogmatize on this question, but it appeared that there was not unfrequently an intimate relation between certain forms of continued fever and local organic impurity. What the precise nature of this relation was, science had as yet failed to disclose. For the solution of this important problem, facts rather than opinions were wanted—facts carefully observed and faithfully and accurately recorded, to the entire exclusion of favour for any particular doctrine. Dr. Greenhow has endeavoured never to lose sight of this principle while conducting the investigation of the outbreak at Over-Darwen (made by order of the Lords of Her Majesty's Privy Council), and in drawing up the results of that inquiry, which he had the honour of submitting to the Society. He had collected, partly from personal observation and inquiry, partly from the oral testimony of the local medical practitioners, all the trustworthy facts possible relative to a very severe epidemic of fever; and, although no certain conclusions as to the cause of the outbreak could be inferred from the evidence adduced in the paper, he still trusted that his communication would serve as a contribution towards that carefully accumulated mass of facts from which the true nature of fever may one day be deduced.

Dr. Greenhow, after giving a topographical description of Over-Darwen, and an account of the numbers, employment, and social relations of its population, proceeded to state its sanitary condition. This was far from being favourable. Near to the town were several large pools, or, as they are locally called, "lodges," constructed for the purpose of storing water for the use of factories. These collectively expose a considerable surface of water, and sometimes of mud, to the action of the atmosphere. The town was, at the time of the outbreak, and had long been, in a very filthy condition. Nuisances very dangerous to health had been allowed to accumulate almost beyond precedent. There was no perfect system of drainage for the removal of the liquid refuse of the population; and, indeed, very few of the privies had even the semblance of being drained. This state of things had existed in almost all parts of the town certainly during many months; in some instances, it was even alleged, for several years previous to the outbreak of the recent epidemic.

The outbreak of the epidemic at Over-Darwen took place on the last days of August; and it spread with such rapidity, that Mr. Wraith, one of the union surgeons for the district, had a hundred

cases under his care within a few days, and at least three hundred within the first three weeks; and the other medical men of the town together must have had an even larger number. The main force of the epidemic (which was typhoid fever) was expended before the middle of November; but sixteen deaths were recorded between the middle of that month and the end of the year, and four more occurred in January of the present year. Altogether, there were about one thousand five hundred cases, of which sixty-nine were fatal, in a population a little over seven thousand.

But, although the main force of the epidemic fell upon Over-Darwen, there were other places in the neighbourhood which were invaded by the disease before it reached this town. At a farm called "Cloyse's Farm," there were cases so early as January, 1861; and dropping cases at long intervals occurred until July. At a small hamlet called Deal Fold the disease appeared in April. In a row of cottages at Ryal, whose sanitary condition seemed in many respects unexceptionable, nineteen out of twenty of these dwellings were invaded, the first having taken place in May. Buryfold, Lower Sunnyhurst, and Sunnyhurst Wood, other small hamlets in the vicinity, were also included in the visitation. The condition and situation of dwellings in which the disease existed, and the stations of the persons attacked, were very various. The earlier cases occurred at elevated situations; which were, however, all more or less damp, and surrounded either by moor, or undrained, half-cultivated land. In Over-Darwen the epidemic prevailed indiscriminately in houses situated near the river and in the more elevated parts of the town. The greater number of sufferers from the disease were young; few persons beyond the age of 35 or 40 having been attacked. Dr. Greenhow next proceeds to inquire—1. Whether the disease had in this epidemic commenced spontaneously, or had been imported. 2. To what extent the disease was associated with such local collections of organic refuse as could taint the air with the products of decomposition. 3. Whether the disease was connected with the ingestion of water impregnated with sewage, or other organic impurity; and 4. Whether the disease was propagated by contagion, and, if so, in what manner.

Dr. Greenhow discusses these questions *seriatim*, and with great care. He refrains, however, from coming to any positive conclusion, leaving it to others to draw such inferences as seemed the most legitimate from the facts he had submitted to them. With regard to the most important part of the inquiry—whether the disease in its origin or progress had manifested contagious properties—Dr. Greenhow says that a careful consideration of all the circumstances which he could authenticate led him to the conclusion that, although some of the facts related were in favour of the contagiousness of the Over-Darwen epidemic, they were capable of explanation in a different way; and that the evidence, therefore, fell short of actual demonstration.

ART. 16.—*An Epidemic of Typhoid Fever dependent upon the Use of Impure Water.*

By Dr. —.

(*Nederlandsch Tijdschrift voor Geneeskunde*; and *Edinburgh Medical Journal*, June, 1862.)

During the autumn of 1860, there prevailed in the convent of the Sisters of Charity, in Munich, an epidemic of abdominal typhus, which was the more remarkable because at that time there were only a very few isolated cases scattered through the town. From the 1st of June till the beginning of September, there were only two cases of typhoid fever in the convent; but from the 19th of September till the 4th of October, when the population of the convent consisted of a hundred and twenty persons, *thirty-one* of the sisters became rapidly affected, one after the other. Some presented gastric symptoms, others were attacked with regular typhoid fever. Of the fourteen cases of typhoid fever, four proved fatal.

The attention of the medical profession was especially called to this state of matters, because the sanitary state of the town was at that time very satisfactory, and typhoid fever was very rare. It was evident, then, that the cause of this epidemic must be looked for in local circumstances; and, after a careful examination, it was discovered that the water, used as drink by the inmates, was mixed with substances in a state of putrefaction, and that it constituted the cause of the epidemic. The local circumstances were the following:—The convent is situated beside the general hospital. In the spring of 1860, a well was dug in the latter, having a depth of twenty feet. This well was distant only two feet from the laundry in which the clothes of the patients were washed, and was surrounded by the openings of five drains, intended to absorb the water which ran off from the laundry, and connected with one another by gutters, from which the water was insensibly filtered into the surrounding soil. This water was turbid, had a disagreeable odour, and contained an abundant sediment. As the drains were only twenty or thirty feet from the well, the water in the latter was contaminated by that in the drains. To demonstrate this fact the contents of the drains and the water of the well were submitted to a careful microscopic examination by Dr. Hessling, a skilful microscopist. He found, in the sediment of the water from the drains, various kinds of matter, of animal and vegetable origin, in a state of decomposition: some could still be recognised by their original forms, but the greater part constituted only a mass of detritus. This detritus was in the form of a flaky coagulum of a dark green colour, forming little masses, some of which contained inorganic matters, such as sand, particles of lime, &c., which seemed to have constituted the nuclei. Both the water and the sediment contained a large quantity of carbonate of lime, and on the addition of a little sulphuric acid, a strong odour, resembling that of rotten eggs, was disengaged; the same phenomena took place even with the small objects which were submitted to microscopic examination. In addition there were observed organic

elements of new formation, such as algæ, spores, vibriones, and monades, which moved rapidly about in the field of vision. The water from the well deposited no sediment; nevertheless, on examining it microscopically, the same elements were observed as in the water coming from the drains, but in a very diluted state, especially as concerns the flaky coagula, the spores, and the vibriones.

It was consequently demonstrated that the water of the well had been contaminated by the contents of the drains. Professor Pettenkoffer, who made a chemical analysis of the water of the well, discovered in it a much larger quantity of organic matters, of lime, and of nitrates, than is contained in ordinary drinking water.

The water of the new well habitually supplied the requirements of the laundry. Between the 17th and 28th September, the time when the epidemic commenced, the water was conducted by pipes into the bath-room and kitchen of the hospital and convent, because, as repairs were being carried on in the bath-room, these establishments no longer received a sufficient supply of water. It was recommended that this water should only be employed for baths, for washing, and for the kitchen, and that the water which was to be used for drinking should be furnished from two wells situated in a court intermediate between the hospital and the convent. Nevertheless, although the attendants in the convent had been sufficiently warned, it appeared, after a careful investigation, that the water which was carried in the evening from the kitchen into the bedrooms of the sisters to be used for the toilette, had been also used for drinking; and all the persons who became ill acknowledged that they had drunk this water.

If it be considered that the epidemic commenced at the very time when this water, which contained putrefying organic matters coming from the dirty linen of the patients, began to be drunk, we are authorized in concluding that the cause of the typhoid affection existed in the poisonous properties of the water—a conclusion which is still further justified by the fact that the epidemic ceased as soon as the water in question ceased to be employed for drinking.

ART. 17.—*On the Prevalence of Typhoid Fever in India.*

(1) By Mr. J. L. RANKING, Surgeon-Major to the 105th Regiment; and (2) Mr. W. R. CORNISH.

(*Madras Quarterly Journal of Medical Science*, April, 1862.)

Surgeon-Major Ranking and Mr. Cornish, in separate and independent articles, corroborate the statements of Drs. Scriven, Goodere, and Ewart, with respect to the existence of true typhoid fever within tropical latitudes. Mr. Ranking's opinion is, that this fever is by no means an uncommon disease in the European population of India.

ART. 18.—*Notes on the Recent Prevalence of Yellow Fever in several of H.M.'s Ships of the West India Squadron upon their Arrival at Halifax.*

By Dr. SLAYTER, Health Officer of Halifax.

(*Lancet*, July 26, 1862.)

The facts adduced by Dr. Slayter are strongly confirmatory of the views of Dr. Archibald Smith as to the intimate relations between typhoid and yellow fever. What we furnish is an abstract of the paper read by Dr. Slayter, at a meeting of the Epidemiological Society of London, with some remarks by Dr. Archibald Smith, which were elicited in the subsequent discussion:—

“Halifax is built on a promontory nearly surrounded by water, and lies on a slope opposite one of the noblest harbours in the world. It possesses a well-arranged system of sewerage, and the houses are not overcrowded. The soil is dry and free from alluvial deposits, and from those miasmatic influences so necessary for the propagation of contagious diseases. The temperature in the hottest days of summer seldom exceeds 80°, and is generally below 75°. All these circumstances tend to render Halifax the safest rendezvous for seamen suffering from that fatal scourge—yellow fever—which has for some years past been prevailing so extensively in the Gulf of Mexico.

“H.M.'s ship *Firebrand* arrived from Jamaica, at Halifax, on the 4th of July, 1861, after a passage of twelve days. There were then seventy-nine of the crew on the sick list—all fever cases. Ten deaths had occurred during the voyage from Port Royal. Many of the sick were moribund, the attendants were exhausted from constant watching, and dejection prevailed amongst all on board. The atmosphere in the between decks was very impure, the port-holes having been closed in consequence of stormy weather. All the sick were at once transferred to a hulk moored off the naval hospital, and the convalescents and others sent to a storehouse in the dockyard. There were fifteen convalescents, thirty convalescing, and thirty-four seriously ill at this time. Several fresh cases occurred subsequently, and two were fatal with black vomit. Besides these deaths in the hospital on shore, sixteen took place amongst the sick in the hulk. From the commencement of the disease, the *Firebrand* lost forty-nine of her crew out of a hundred and seven attacked.

“H.M.'s ship *Spiteful* arrived on the 16th of August, 1861, at Halifax from the Bahamas, which she had left seven days before. Eleven deaths had occurred on the passage, and forty-six cases were on the sick list on arrival; two died that night. The sick were at once sent to the hulk, and the convalescent and the well to the dockyard. Some of these sickened with the fever on shore, and were then transferred to the hulk. Altogether thirty-three sick were treated at Halifax, and of these twelve died. The *Spiteful* lost in all thirty-six of her crew, out of eighty-eight attacked.

“H.M.'s ship *Racer* arrived at Halifax from Nassau on the 3rd

of September, 1861. During the passage nineteen cases and five deaths occurred. Several fresh attacks took place after arrival. The total number of attacks among the crew of this ship was sixty-one, of which twenty proved fatal.

"The case of H.M.'s ship *Jason*, is especially instructive. She reached Halifax on the 2nd of September, 1861, from the Gulf of Mexico, which she had left sixteen days before in consequence of fever having broken out on board. During the voyage forty-six fresh cases and ten deaths took place. All the sick were sent to a building in the dockyard. A good many fresh attacks occurred after arrival. The total number of attacks among the crew was seventy-nine, and seventeen proved fatal. About the middle of November the *Jason* returned to the West Indies. She had been cleansed out while at Halifax, and much filth had been removed from her hold. Her ventilation also, which had been very defective, had been improved by cutting fresh hatches in the decks, taking down bulk-heads, &c. Within eight days, however, after leaving Halifax, typhoid fever appeared among the crew, and the first two cases were fatal. The disease continued to appear at intervals on board while the ship was off the Mexican coast. It did not assume the character of black-vomit fever until the month of March, and the change of type seemed to be consequent upon the ceasing of the northerly winds, and the setting in of close, muggy weather. Before the decided yellow fever manifested itself, the health of the ship's company had not been satisfactory; cases of ordinary catarrh, dyspepsia, and diarrhoea showing a tendency to lapse into fever. The same thing had been observed the year before, prior to the outbreak of the more malignant disease. Notwithstanding the purification of the ship's hold at Halifax, and every effort to keep the bilges as clean as possible, the latter were at times offensive. It was judged expedient that the *Jason* should again leave the West Indies and proceed to Halifax, which she reached at the end of April. No fresh cases of fever had occurred on board for a fortnight previously.

"Without further details, it may be mentioned that of 855 men, the aggregate crews of five steamers, no fewer than 499 were attacked with fever, and 162 died. It is instructive to learn that not a single case of the fever occurred among any of the people about the dockyard at Halifax, or in any other person of the town."

After the reading of Dr. Slayter's notes, Dr. Archibald Smith (for many years resident in Peru), in answer to a question of the President on the influence of temperature on yellow fevers, stated that he had noted all the essential symptoms of the disease at an elevation of 11,250 feet, with a temperature in the wet season of 62° within doors, and but little variation day and night. At this temperature the disease lost none of its energy. In 1853 yellow fever appeared simultaneously on both sides of the Andes, and in 1854 assumed its most malignant character as well by the sea-board as on the hill land. It was shown that these epidemics were of one generic nature. The yellow-fever symptoms became modified gradually into the typhous or typhus, in the transit from the Pacific

shores to higher and still higher regions of the Andes. In the warmer inland valleys—as, *e.g.*, in the sugar-growing district of Abancay—the fever which, near the snows of the Cordillera, was metamorphosed from the typhus (icterodes of the coast) into a form which in a great measure represented ordinary British typhus, was again reinstated with its most aggravated coast symptoms of yellow fever—such as intense frontal headache, dark sanguineous vomiting or evacuations, subcutaneous hæmorrhage in form of large dark maculæ, nasal hæmorrhage, intense yellow colour of the skin, and the most extreme prostration of vital forces. In the Sierra it was propagated slowly from place to place, and from person to person. It was all but incurable in the dark and crowded huts, but yielded readily in a great majority of cases to early treatment under the advantages of pure air and hygiene. Left to itself in the hovels of the Indian poor, it was prodigiously fatal.

ART. 19.—*An Effectual and Simple Remedy for Scarlet Fever and Measles ; with an Appendix of Cases.*

By Mr. CHARLES WITT.

(8vo. Pamphlet, pp. 31. London : 1862.)

This is a third edition of a semi-professional effort to advocate the virtues of *sesquicarbonate of ammonia*—for this is the effectual remedy in question. This salt is to be given *alone*, simply dissolved in water, the dose being regulated by circumstances, six, seven, or more grains every hour for the first day, and then the dose diminished or the intervals increased as the case may require. Several persons have preceded Mr. Witt in bearing testimony to the value of the treatment recommended ; indeed, our author claims no originality. Of the value of the treatment we ourselves have no doubt, and Mr. Witt does good service in advocating it.

ART. 20.—*On the Temperature, Urea, Chloride of Sodium, and Urinary Water in Scarlet Fever.*

By Dr. SYDNEY RINGER, Resident Medical Officer in University College Hospital.

(*Proceedings of the Royal Medico-Chirurgical Society*, January 28, 1862.)

The observations were made on patients in the Hospital for Sick Children, under the care of Drs. West, Jenner, and Hillier. Thirty cases are given. The temperature, taken several times during the day, is given in charts. The urea and chloride of sodium were estimated daily by Liebig's volumetric method. The observations extended over a variable time, in some cases till the forty-fifth day of the disease.

The Temperature.—1. This fell, in the great majority of cases, on either the fifth, tenth, or fifteenth day of the disease.

2. When the temperature remained high till the fifteenth or the

twentieth day, a fall of variable intensity occurred, usually on each of the preceding fifth days—namely the fifth, tenth, and fifteenth. The temperature after each fall in some cases remained, during the subsequent five days, at the same point reached on the preceding fifth day; in other cases it rose again, reaching during the second or third five days a point as high as it did during the first five.

3. Each fall of the temperature is accompanied by an improvement in the state of the patient, which remains permanent when the temperature does not again rise.

4. Of seventeen cases that came early under notice, the average maximum temperature was a little above 103° .

5. Subsequent to the great fall experienced on the fifth, tenth, or fifteenth day, the temperature often remained rather too high over a variable time, in some cases for fifteen days. The degree of elevation varied, in some cases being between 100° and 101° , but more frequently between 99° and 100° . This elevation of the temperature also usually experienced a fall on each fifth day.

6. This subsequent elevation of the temperature, if of any persistence, was coincident with a continuation of the lesions produced by the scarlet fever, as sore throat, &c. It sometimes preceded an attack of Bright's disease.

7. At a variable period after the scarlet fever, another elevation of the temperature occurred, due either to Bright's disease, endocarditis, tuberculosis, or chicken-pox; in two cases the cause could not be ascertained.

8. The date of the second elevation varied; thus, counting from the commencement of the scarlet fever, in albuminuria the mean of six cases gave the twenty-second day; in two cases, in which the elevation was probably due to endocarditis, the elevation began on the eighth day; in one case of chicken-pox it commenced on the sixth day; in one case of tuberculosis, on the ninth.

9. The duration of the elevation due to the above causes varied from two to thirteen days.

10. This subsequent elevation of the temperature due to intercurrent disease, always fell either on a fifth day from its own commencement or on a fifth day from the commencement of the scarlet fever.

11. Thus the temperature forms arcs or cycles, lasting in the majority of cases five days; this equally applies to the temperature of the scarlet fever, or of any subsequent intercurrent disease.

12. In severe cases the temperature remained at the same point throughout the day; in slighter cases it fell in the morning and rose during the day: this fall in the morning is one of the earliest signs of improvement.

13. The hour of the day at which the temperature reached its highest point varied greatly. It was most frequently at its highest at some time between two p.m. and eight p.m.

The Urea.—1. The urea appears to suffer no increase during the fever.

2. The amount of urea for many days after the decline of the fever is far below the amount normal to the patient.

3. From the above, the author thinks it probable that the kidney is affected from the commencement of the attack, and the elimination of the urea thus checked. In some of the cases the children were puffy about the face, without any blood or albumen occurring in the urine; this perhaps was caused by the retention of urea.

4. On the intercurrent of Bright's disease, the urea in some cases was greatly diminished; in other cases no diminution occurred.

The Chlorides.—1. The chlorides were never found absent in any of the cases analyzed.

2. Their amount was always much diminished during the fever days.

3. After the fall of the temperature the chlorides increased gradually.

4. In one case in which Bright's disease supervened the chlorides were estimated; they suffered very little diminution.

The Urinary Water.—Often during the fever there is no diminution in the amount of urinary water; in some cases it is increased.

The Albumen in the Urine.—1. The albumen appears at two different periods: (a) during the fever days; (b) later, during the non-fever days. Out of 21 cases, it only appeared once during the fever days. Of 18 cases which were in the hospital for a considerable time, in 7 albumen appeared during the fever free days.

2. The time of its appearance varied from the ninth to the twenty-third day.

3. The duration of the albumen in the urine varied from three to forty-nine days.

4. There is no necessary connexion between the intensity of the inflammation (tested by the elevation of the temperature) and the duration of the albumen in the urine.

5. There is no necessary connexion between the intensity of the inflammation and the amount of albumen in the urine.

Blood in the Urine.—1. There may be an elevation of the temperature, due probably to inflammation of the kidney, without any blood in the urine.

2. In no case did blood appear without previous elevation of the temperature.

3. In some cases the blood continued long after the fall of the temperature, and thus probably after the decline of the inflammation.

Relationship between the Blood and Albumen in the Urine.—1. A very large amount of albumen may occur in the urine without any blood.

2. Blood to a very large amount may occur in the urine with the slightest trace of albumen; and if the blood-corpuscles be allowed to settle, the supernatant fluid may give no evidence of albumen.

These cases given were seldom dropsical; they, however, often looked puffy in the face. In some cases the second elevation of the temperature due to Bright's disease was not followed even by puffiness. In one case the patient was puffy, without any other indication of Bright's disease.

On a Cycle in Disease.—In the cases given the temperature did not run an equable course, neither remaining at the same tempera-

ture throughout; but formed cycles, composed of a variable number of days, each cycle, however, being composed of the same number of days in the same patient. The cycles in the great majority of cases were composed of five days.

On a Cycle in Health.—The author tries to prove from the cases given that in health we have a daily and a five-days' cycle of tissue change. He further tries to show that in fevers we have a great increase of this daily and five-days' cycle of tissue change, from which results the great elevation of the temperature.

ART. 21.—*On the Treatment of Acute Rheumatism, considered with Regard to the Liability to Affections of the Heart under Different Remedies.*

By Dr. W. H. DICKINSON, Assistant-Physician to the Hospital for Sick Children.

(*Proceedings of the Royal Medico-Chirurgical Society*, June 10, 1862.)

This paper is based upon a tabular condensation of the cases of acute rheumatism which were admitted into St George's Hospital during the five years ending on December 31st, 1861, and in whom the heart was, on admission, unaffected by the disease. The method of treatment adopted in any particular case depended very much upon the chance of the patient coming under one physician rather than another; and a comparison of the results would, to a certain extent, be a guide to the value of the means used. The cases, therefore, were classified according to the treatment made use of. As the main object of the investigation was to ascertain the effect of remedies in preventing cardiac mischief, the arrangement was not altered by measures adopted in consequence of its occurrence. The tables were fourteen in number. The first gave the results of 8 cases in which venesection was early resorted to, other medicines being at the same time used. In three of the cases endocarditis or pericarditis was clearly recognised. In 1 there was incomplete evidence of cardiac derangement. The heart, therefore, was absolutely uninjured in only half the number. The patients remained in the hospital for an average period of forty-one days. Bouillaud, who is the great advocate of bleeding in this disorder, and trusted to it almost exclusively, expresses his opinion that such complications are the rule and not the exception. The second table gives the result of 6 cases treated solely with repeated doses of calomel and opium. In two subsequent classes were seen the effects of the same medicines aided by saline draughts, with and without nitre. The progress of the disease under each plan appeared to be much the same. The total of 24 cases presented 6 of inflammation of the heart or its membranes, of which two proved speedily fatal. The average number of days in hospital under mercurial treatment was thirty-seven.

The action of some reputed specific remedies is then considered. With regard to opium, reference was made to some tables published by Dr. Sibson in the *Association Medical Journal*. Twenty-one

cases are here recorded, in which, when the treatment was commenced, the sounds of the heart were natural. Opium was given in frequent doses, sometimes as much as a grain an hour, besides other remedies supposed to have an effect in rheumatism. No less than 14 of these cases, or exactly two-thirds, manifested while under treatment symptoms of valvular or pericardial inflammation.

The cases, 7 in number, treated with nitre alone, gave only 1 of cardiac complication. The average duration of the treatment was reduced to twenty-seven days. Further evidence in favour of nitre is deduced by comparing the result of cases treated with saline remedies alone, and those which had salines with nitre in addition. A table contributed by Dr. Basham to the "Transactions" of the Society is quoted. Of 67 cases of acute rheumatism treated with large doses of nitre, the heart being in each case unaffected at the commencement of the plan, 6 only had symptoms of inflammation of that organ.

In considering the treatment of saline remedies, the use of the term is limited in an arbitrary manner. It is assumed that the salts which potass and soda form with the vegetable acids undergo such changes in the system as to become equivalent, or nearly so, to the same quantity of alkali in combination with carbonic acid. Whether a certain quantity of potass is given as citrate, tartrate, acetate, or carbonate, the effect upon the urine and upon the system generally was held to be much the same. The arrangement was made accordingly. Those patients treated with an aggregate of such salts not reaching three drachms a day were considered as under saline treatment; those taking as much as three but less than four drachms, as under partial alkaline treatment; those taking from half an ounce to an ounce and a half, as under full alkaline treatment. Sixty-two cases appear to have been subjected to saline treatment, alone or with other remedies. These afforded a proportion of heart affection of 1 in 3·6. The conclusion was that salines in such quantities had but little influence upon the course of the disorder; when used in conjunction with more potent remedies, the result always corresponded with the observed effect of the additional medicines when used independently.

With the increased doses, which the author distinguishes as partial alkaline treatment, no diminution of the heart symptoms was observed, although the disorder terminated in rather a shorter time.

The full alkaline treatment is exemplified by two tables. It consisted in the administration of the salts which potass and soda form with carbonic and the vegetable acids, in quantities varying from half an ounce to an ounce and a half daily. Half a drachm of the acetate, with twice as much of the bicarbonate, of potass, dissolved in the *haustus ammoniæ acetatis* of the hospital pharmacopœia, furnished an ordinary form of prescription. This was given every four or six hours, and sometimes made to effervesce by the addition of a little citric acid. Salts of soda were sometimes resorted to. The total of 48 patients thus treated passed through the dangers of the disease, with only a single instance of any cardiac affection. In the exceptional case the murmur came on within twenty-four hours of

the commencement of the treatment, and did not prove permanent. The average number of days in hospital, when this treatment was applied simply, was 25, the smallest of all; when other medicines, as colchicum, were used in addition, five days were added to the average period. Dr. Garrod's published cases, in which bicarbonate of potass was used alone, are quoted as rather less successful than those at St. George's, in which neutral salts were given in addition. Twenty-four of Dr. Garrod's cases afforded 3 of inflammation of the heart or its membranes. It was concluded that the carbonates of potass and soda, and those of their other salts which in the body are capable of being converted into the carbonates, exert an especial curative power in rheumatic fever, and, if given in time, will completely protect the heart from the dangers by which it is surrounded. Taking the proportion of heart affection under the alkaline system, 1 in 48, and, with this as a standard, reviewing the other plans of treatment, the result was striking. One hundred and thirteen cases where other remedies were used gave 35 instances of cardiac mischief, or a proportion of 1 in 3.2. Nitre, next to the alkalies, was the most successful. The general symptoms were shortened under its use, and the frequency of cardiac inflammation was reduced to 1 in 10. Regarding the other remedies which have been credited with the cure of acute rheumatism, it simply became a question which were useless and which injurious. Mercury allowed a proportion of cardiac inflammation of 1 case in 4. Saline treatment gave a worse result. With bleeding, one-half of the cases became thus complicated. Under opium the mischievous influence of the disorder attained its maximum. Two-thirds of the cases so treated had the symptoms of endocarditis, or pericarditis. With the exceptions stated it was maintained that the more active the remedies, the more untoward, generally speaking, is the progress of the disease. It was shown that the use of colchicum retarded the recovery of the patient. The practical deduction was, that acute rheumatism is best treated by giving at short intervals a solution of nitrate, acetate, and bicarbonate of potass in such doses that ten or twelve drachms of the two latter salts together are taken in the twenty-four hours. Half a drachm of the acetate, with a drachm or a drachm and a half of the bicarbonate, and ten grains of nitre, would answer the purpose.

A brief review of the history of the alkaline treatment of rheumatism concludes the paper.

ART. 22.—*On the Treatment of Acute Rheumatism.*

By DR. CHAMBERS, Physician to St. Mary's Hospital, &c.

(*Lancet*, August 23, 1862.)

In a clinical lecture on this subject, Dr. Chambers gives these directions:—

“1. The patients are bedded in a peculiar fashion. All linen is strictly forbidden to touch the skin. A slight calico shirt or shift may be allowed; but if they possess under-clothing only of the pro-

hibited sort, they are better naked. Sheets are removed, and the body carefully wrapped in blankets, which are so arranged as to shut off all accidental draughts from the head. The newest and fluffiest blankets that can be got are used. The bedclothes being put so are kept so, and students are warned that, when they listen to the sounds of the heart, they must not throw open the blankets, but insert their stethoscope (first warmed) between the folds.

"2. Those joints or limbs which are swollen, red, or painful, are wrapped up in flannels soaked with a hot fomentation, consisting of decoction of poppy-heads, with half an ounce of carbonate of soda to each pint.

"3. The following drugs are prescribed with a curative intention:—

"(a) If the skin is red, swollen, and painful about the joints—if the cellular tissue around the muscles is infiltrated and sensitive, so that motion is impossible or exquisitely painful—more especially if these phenomena are metastatic, leaving one part free and attacking another,—then they get the alkaline treatment pure and simple: they have a scruple of bicarbonate of potash in camphor-water every other hour, night and day, when awake.

"(b) If the above-named phenomena are insignificant, and the pain is felt more in the bones—if it is intensified rather by pressure than by motion—if it is fixed in one spot and not metastatic—then I add two grains of iodide of potassium to each dose; and directly the symptoms have taken a turn towards alleviation I leave off the alkali altogether, and give only the iodide.

"4. Opium, as a palliative, is given in exact proportion to the degree of subjective sensation of pain. If one grain be not enough to entice sleep, a grain and a half is administered; if that do not avail, two grains. Directly the pain is better, the quantity of the drug is diminished. Nothing effects the desired object so well as pure opium.

"5. If the pain remains fixed in one joint, instead of leaving it like in other places, leeches are applied there, and the part is kept poulticed. When we can get them, young laurel leaves, bruised, are mixed with the poultice.

"6. The latter treatment is applied also to the cardiac region, if the heart has become inflamed either inside or out. The pain is taken as an indication of the extent to which the leeching is to be pushed, so soon as it is proved by auscultation that such pain arises from inflammation of the heart, and not from rheumatism of the pectoral muscles. The constant application of the poultice is made imperative.

"7. The diet is varied in some degree according to the antecedent circumstances of the patients. If they have been robust hearty persons before the attack they will bear a good deal of starvation, and they are put on our 'simple diet'—to wit, bread-and-butter, gruel, and tea, in quantities practically at discretion. If previously they have been ill nourished, by reason of either ill health or poverty, a pint of broth or beef-tea is added."

ART. 23.—*On the Occurrence (hitherto unnoticed) of Malignant Pustule in England.*

By Dr. WILLIAM BUDD, Physician to the Bristol Royal Infirmary.

(*British Medical Journal*, August 9, 1862.)

In France, Germany, and other parts of the Continent, under the significant name of Malignant Pustule, a disease has long been familiarly known and described which proves fatal every year to a large number of persons. Beginning as a minute vesicle, which is seated *always on some uncovered part*, its special character is to excite a peculiar form of gangrenous inflammation, which, spreading rapidly from the point first affected to the neighbouring tissues, gives rise to local changes of very uncommon aspect, and finally destroys life by general infection.

A disease calculated by so much that is striking to arrest attention has naturally been made an object of inquiry by many eminent observers. A long list of German, French, and Italian writers might be cited, each of whom has added something to its history. The following important points appear to be established by their investigations:—

1. That the malignant pustule in man is identical with and derived from the fatal and eminently contagious disease which, under the name of "charbon," or (in sheep) "sang," has prevailed from time immemorial on the Continent in oxen, sheep, horses, and other animals.

2. That the disease may be communicated to man from the animal in the following ways:—

a. By direct inoculation, as in the case of butchers, herdsmen, drovers, and others, in whom accidental inoculation with the malady appears to be an event of not unfrequent occurrence in the countries in which "charbon" most prevails.

b. By means of the skin or simply the tainted hair of diseased beasts—modes of communication of which many decisive examples are on record.

c. By eating the flesh of animals killed while affected with "charbon."

d. And, lastly, by the bite of insects which have been in contact with the bodies or carcasses of diseased cattle—a mode of inoculation obviously difficult to demonstrate, but in proof of which numerous cases, and some apparently entirely free from ambiguity, have been recorded.

3. That the malignant pustule, when contracted by man, may be communicated by contagion to other men, or back to the animal by inoculation.

In whatever way the disease may have been contracted, it is at the outset local only, the general poisoning which ensues being due to the after-diffusion of the morbid changes and products engendered in the part first affected.

From this summary it appears that this remarkable affection has not only been closely studied by a great number of Continental physicians, but that their published observations upon it amount to a considerable body of medical literature. This being the case, it is certainly a very curious fact, whatever the explanation, that the profession in England are almost entirely silent on the subject. Mr. Druitt, in his "*Vade-Mecum*," and Dr. Copland, in his "*Medical Dictionary*," are, as far as the author has been able to ascertain, the only English writers who have treated of it at all. Both speak of it as being all but unknown in England, and both, professedly, derive their account of it from the French. In the long list of writers on malignant pustule appended by Dr. Copland and by Virchow to their respective articles on the subject, no English name appears.

From this one of two things is clear, either that a malady which is unlike any other, and which, in all respects, is one of the most remarkable to which man is liable, has hitherto escaped recognition here, or that the malignant pustule (except, perhaps, as a thing of extremest rarity) is never met with in England. This last alternative, if true, would be very difficult to explain, inasmuch as the "epizootic" from which malignant pustule is derived, so far from being unknown here, has from a very remote period caused every year a large mortality in the live stock of the English farmer. The "joint murrain," "black quarter," or "quarter evil," and "the blood," (the name by which the malady is known in the sheep,) are the same disease as the "charbon" or "sang" of the French, and the "milzbrand" of the German writers. That a disease which is known to be communicable to man should abound here, and yet never be communicated to him, would be a strange, if not an unaccountable thing.

It was one of the objects of this paper to show that the fact is not so, and that the true reason why the disease in question has not been noticed by English writers, is that it has hitherto been confounded with other maladies which offered some points of analogy with it.

In proof of his position Dr. Budd related nine cases of malignant pustule, in which all the most striking characteristics of the disease were present in the highest degree. Of these nine cases, three were under his own care; the notes of the remaining six were furnished to him by personal friends.

In all the cases which were watched from their commencement, the disease first showed itself as a small red pimple, attended by severe itching, or by a hot stinging sensation, which was described as very peculiar. In this stage it resembled the bite of a gnat, to which it was likened in more than one instance; and in two of the number it seemed to be the actual result of the bite of that insect.

In the course of a few hours the pimples was seen to be surmounted by a minute vesicle, containing a little reddish-yellow serum. These first appearances were soon followed by more characteristic changes. The first in order was a blackening and hardening of the immediately surrounding and subjacent tissues, which, rapidly extending itself, ended by invading a large area. This process was attended

by wide-spread swelling and infiltration of the neighbouring parts, which put on the aspect of malignant erysipelas. In several cases, chains of inflamed lymphatics were seen passing from the seat of the disease over the forehead and down the neck. In one, severe double pleurisy occurred as a result of the general infection.

In all, there was everything to show that at its onset the malady was purely local. At first, there was an entire absence of constitutional disorder, and several of the patients were well enough to follow their usual occupations for two or three days after the first appearance of the characteristic vesicle. When the general symptoms set in, they were chiefly marked by great and rapidly-growing prostration, by frequent pulse, hurried breathing, and other well known signs of septic poisoning. All terminated fatally, death occurring within a period ranging from the fourth to the eighth day.

When the disease began in the lip—which was the case in the great majority—the enormous prominence of the mouth, its hard and rigid state, and its almost black colour, caused a peculiar and hideous disfigurement, which was in the highest degree characteristic.

In all the cases that were narrowly watched from the first, a second crop of vesicles made its appearance as the disease advanced in the immediate neighbourhood of the first. In the patients that fell under Dr. Budd's own care, the breath exhaled a peculiar and most repulsive odour.

Taken in their whole succession, the phenomena here recounted are diagnostic of malignant pustule, and are met with in no other malady. They are identical in every minute particular with the phenomena which have been recorded in numberless instances in which the disease has been contracted by accidental but direct inoculation from animals affected with "charbon." In their fatality, as well as in every other character, they are also identical with the phenomena which this last-named malady exhibits in the beast.

In addition to the foregoing, the author had obtained some particulars of no fewer than fifteen other cases which have occurred within a few years in various parts of England, making twenty-four in all. In two of the twenty-four the affection was seated in the hand; in the rest it occurred in the face, and generally on the lip or in the immediate neighbourhood of it. In all, therefore, it made its appearance *on parts that are habitually uncovered*; a circumstance on the importance of which the French and Germans very rightly insist as significant of inoculation from without. In two of the series the pustule appeared to result from the bite of a gnat. In another it was caused by contact with the carcase of a sheep that lay dead in a field. The subjects of three other cases were persons whose occupations brought them into daily contact with a large number of sheep and bullocks. With these exceptions, nothing was made out in the history of the cases to give any clue to the origin of the disorder. As by the greater number of the observers its possible derivation from diseased animals was never once thought of, no inquiries were made of a nature to throw light on the subject.

ART. 24.—*On the Connexion between Diphtheria and Croup.*

By Dr. HILLIER, Senior Assistant-Physician to the
Hospital for Sick Children.

(*Medical Times and Gazette*, April 26, 1862.)

"What, then," says Dr. Hillier, in a clinical lecture on Diphtheria, "are the distinctions between diphtheria and croup as laid down by Dr. Jenner? 'There is no evidence to show that croup is anything more than a local disease, that it is contagious, that it occurs as a wide-spread epidemic, that it affects a large proportion of adults, that there is albumen in the urine, that symptoms of disordered innervation follow recovery from primary affection.'

"First, as to contagion: On this point there is much difference of opinion, even as it regards diphtheria; and if we suppose that the contagion is produced by direct contact of the contagious material (which is probably the lymph or sputa) with some mucous membrane or abraded surface, as there is good reason to suppose; and that even this is not sufficient to induce the disease unless a person be predisposed to it, we can quite understand that diphtheria, or croup, may exist as an isolated disease, and when confined to the larynx, and there is no epidemic influence predisposing people generally to its occurrence, other children may not take it. Then as to its epidemic character; that appears to me to be begging the question. I maintain that diphtheria is epidemic croup, or that croup is sporadic diphtheria of the air-passages; when croup is epidemic, it assumes the form of diphtheria. We may get mild isolated cases of scarlatina simplex when there is no epidemic of the disease. Are they more unlike epidemic scarlatina anginosa than asthenic croup is unlike asthenic, pharyngeal, or nasal diphtheria? As to its attacking adults, we can readily understand that when the disease is not epidemic, children only will suffer; when it is epidemic, adults are unable to withstand its attacks; just as now we get every summer cholera in infants, but in adults we only get it when it becomes epidemic. As to albumen in the urine, there is albumen found in unmistakable severe cases of croup, as well as in diphtheria, as I have myself observed in two instances. 'The symptoms of disordered innervation which sometimes follow recovery' from diphtheria, afford the strongest argument, in my mind, in favour of the theory of their distinctness. But when we see how recently attention has been called to these symptoms, even in diphtheria, that they have only been recognised in Paris about eight years, that they escaped the attention of M. Bretonneau in the epidemics which he so ably describes, if, indeed, they were present, which is very doubtful, we need not be much surprised that they should not have been seen in this country succeeding croup, or, at any rate, not be recognised as a direct sequel of that disease. The symptoms to which I refer, you are, I presume, acquainted with,—namely, different paralyses, such as of the velum pendulum palati and muscles of the pharynx, of the lower and upper extremities, amaurosis, loss of sensation in the limbs, and extreme infrequency

of the pulse. Now, I am not aware that in any of the cases which have occurred at this hospital during the last five years these nervous symptoms have been noted, clearly showing their infrequency and the fallacy of drawing any conclusion from their absence in the history of croup. I may say that I have, in private, seen a case of paraplegia and a case of partial amaurosis, both of which got well in a few weeks after attacks of diphtheria.

"Anatomically, there appears not to be a shade of difference between the cases of asthenic croup, such as Dr. West described, in which there was false membrane of the fauces, and cases of diphtheria, involving the larynx at an early period. Sometimes when a case is brought to the hospital with laryngeal obstruction and croupy cough, and the history of a sudden accession of such symptoms with a certain amount of febrile disturbance, the question is asked, is this diphtheria or is it croup? An examination is made of the fauces; if a patch of false membrane can be seen, it is commonly said to be diphtheria; if there is none to be seen, and the symptoms be not very asthenic, it is called croup. In either case there may be swollen lymphatics in the neck, and there may or may not be albumen in the urine. Now, it is quite certain that true diphtheria may have reached the larynx without any deposit having appeared on the fauces, and that true croup may be accompanied by a patch of false membrane on the fauces. How, then, are we to make a distinction? The question is not merely one of words, because generally, if the case is pronounced croup, either antimony or calomel is prescribed, with or without leeches, and low diet; whilst if it is pronounced diphtheria, stimulants and tonics are more commonly ordered with abundant nutriment. When I come to speak of treatment, you will see that I do not make this distinction in practice."

ART. 25.—*Acute Anæmia of Drunkards.*

By MM. DUMENEL and G. PARCHET.

(*Gazette Hebdomadaire*, ix., vol. ii. p. 23. 1862.)

The case is that of a man, aged 42, an habitual drinker. The first symptom of illness was pains in the lower extremities, which were mistaken for sciatica. After these had lasted three weeks, a rapidly increasing pallor and an unaccountable œdema of the legs was noted; a week later a slight jaundice tint made its appearance; there were shiverings and epigastric pains with rapid pulse, and percussion showed enlargement of the liver and spleen, with consolidation of the bases of the lungs; an anæmic bruit was heard at the base of the heart. The feverish symptoms increased, perspiration became profuse, the jaundiced tint deepened, and an incomplete palsy of the arms appeared. Towards the evening of the thirtieth day from the commencement of the illness collapse set in, with a tendency to coma; the blood was now examined, and appeared unusually pale; looked at under the microscope, it was seen to contain but few red corpuscles, and these pale, shrivelled, and shrunken, together with numerous amorphous granules. Death occurred a few hours later,

by way of collapse: there were no vomitings or convulsions. Post-mortem examination showed consolidation of the bases of the lungs behind, and purulent infiltration of these parts; slight increase of sub-arachnoid and pericardial serosity: muscular tissue of the heart exhibiting the appearances of fatty degeneration: great increase of the pericardial fat. Liver much enlarged, and in an advanced stage of fatty degeneration; spleen enlarged, reddish-brown coloured, and soft; mucous membrane of stomach covered with stellate points of injection. Blood in splenic vein but loosely coagulated, and exhibiting the above-named microscopic characters; all the other abdominal vessels were empty. In the right ventricle of the heart some uncoagulated blood was found, which showed under the microscope no alteration in the form of the red corpuscles, but a great increase of the white ones, and a large number of molecular granules, the latter were about 0.001 millimetre in diameter, and resembled the fat granules in the muscles.

(C) CONCERNING CHRONIC DISEASES.

ART. 26.—*On the Use of Arsenic and Sesquicarbonate of Ammonia in Ague.*

By Dr. EDWARD ADAMSON, of Rye, Sussex.

(*Edinburgh Medical Journal*, May, 1862.)

“As a substitute for the preparations of cinchona in the treatment of ague,” says Dr. Adamson, “I doubt if there be any remedy more efficacious and trustworthy than the combined use of sesquicarbonate of ammonia and liquor arsenicalis. In ten cases, all adult males, treated solely with this remedy, it proved uniformly successful. Thus: in one case only—a quotidian—was its administration followed by two paroxysms; in seven other cases (one quotidian and six quartan) only one paroxysm subsequently recurred; and not one in the remaining two cases (one tertian and one quartan). As yet I have opportunity of using these combined drugs in only two other cases of adult males; but, as both these cases had long resisted quinine, though readily yielding to the ammonia and arsenic, I do not include them in the preceding list. The quantity of the sesquicarbonate usually given was five grains dissolved in an ounce of water, with the addition of five minims of liquor arsenicalis; this dose being repeated *every two or every three hours*, according to the frequency of the paroxysms. In no case did any inconvenience result, save some degree of griping in one patient, in whom, as well as in three others, there was slight itching about the eyelids, and this was not spontaneously complained of but in two cases. Doubtless the real anti-periodic power is to be ascribed to the arsenic, which the sesquicarbonate, while exaggerating perhaps its efficacy, renders more easily tolerated by the system.”

ART. 27.—*On the Nitric Acid in Intermittent Fever.*

By Dr. WILLIAM A. HAMMOND, Professor of Physiology in the University of Maryland.

(*Maryland and Virginia Medical Journal*, February, 1861.)

Dr. Hammond strongly recommends the use of nitric acid as a remedy in intermittent fever, and gives a table showing the actual results in a number of cases thus treated.

"This table," he says, "forms the basis of a report made about four years since to the Surgeon-General of the Army, and has never been published. The cases were treated at Fort Riley, Kansas Territory, in the post hospital, then under my charge, in a period of six weeks in summer.

"Upon referring to the table, it will be seen that in all forty-one cases were treated, ten of these being of the quotidian type, and thirty-one of the tertian. Thirty-two cases were treated with the nitric acid, and nine with the sulphate of quinine. Of the cases cured by nitric acid three had previously used quinine without effect, and of those in which quinine had proved successful nitric acid had been employed without benefit in two, and in one other had to be omitted on account of causing nausea, heartburn, etc.

"The average period of treatment before the disease was permanently arrested was the same with each remedy—three days. The nitric acid was uniformly given in doses of ten drops (properly diluted with water) three times per day, the quinine in doses of eight grains three times per day.

"Besides the fact that the nitric acid was equally successful with quinine in arresting the disease, the difference in the cost of the two articles is so greatly in favour of the former substance as to render it an object of importance to make its curative properties more widely known.

"Nitric acid was first used as an anti-periodic by Dr. E. S. Bailey, of Indiana. Its peculiar properties were brought to the notice of the profession by Dr. George Mendenhall, in the *Western Lancet* for August, 1854. A notice of the discovery is also contained in the *American Journal of Medical Sciences* for October, 1854." * * *

"Since the foregoing cases were treated, I have very frequently employed nitric acid in the treatment of intermittent fever, and have rarely been disappointed in my expectations of its curative action. In fact, in simple uncomplicated intermittent, I seldom have occasion to use anything else.

"In cases of enlargement of the spleen, consequent upon frequent attacks of the ague, the remedy in question has, in my hands, proved very advantageous.

"The whole subject is one of great importance to the physicians of malarious districts, and I trust will sufficiently engage their attention as to induce them to test the curative power of nitric acid in those cases of intermittent fever which may fall under their charge, and to add to the sum of our knowledge by reporting for the information of others the results at which they may arrive."

ART. 28.—*On the Connexion of Lead-impregnation with Gout and Rheumatism.*

By Dr. J. WARBURTON BEGBIE, Physician to the Royal Infirmary, Edinburgh.

(*Edinburgh Medical Journal*, August, 1862.)

In some excellent observations on clinical medicine, Dr. Begbie relates two cases in illustration of the really intimate connexion (originally pointed out by Dr. Garrod) which subsists between lead-impregnation and gout.

CASE I.—W. B., æt. 30, a house-painter, admitted to Ward V., 6th May, 1862. Has followed the occupation of painter since he was thirteen, always mixing his own colours. For many years his habits have been intemperate. He has consumed porter and ale freely, but has very rarely indulged in whisky.

About four years ago, suffered for the first time from colic. This attack was slight; but in the course of twelve months was succeeded by a second, much more severe, and attended by great constipation. Since then he has suffered repeated attacks of colic, till thirteen months ago, when the earliest indications of paralysis appeared: the fingers of the right hand being first affected. The paralysis gradually increased, and, ten months ago, both hands were disabled. During this time he has had several severe convulsive seizures, attended by complete loss of consciousness. On admission, the patient presents a well-marked example of wrist-drop in both arms, and is quite unable to extend the hands. He can flex the latter, but not firmly or completely. The muscles of the upper-arm and shoulder are quite unaffected; the extensors of the fore-arm are evidently considerably wasted, and the muscles of both thumbs still more so. There is a good deal of tremulousness visible when movements of the upper limbs are made. There is no loss of power in the inferior extremities, and the patient voids water without any difficulty. The amount of urine is considerable: it is of pale colour, acid reaction, having a density of 1·010, with a very faint trace of albumen. The bowels are now no longer confined. A distinct blue line exists along the free margin of the gums, and the teeth are much discoloured. Was ordered as follows:—

R. Potassii Iodidi, ʒ ij.

Aquæ Destillatæ, ʒ xij.—*Solve.*

Sign. Sumat cochlearia duo ampla bis indies.

10th May.—Complains of severe pains in the ball of the great toe of right foot, and also in the right ankle-joint. The former is considerably swollen and tender; the cutaneous surface is also reddened. Patient states that he has suffered greatly from pains in different joints, and that on three former occasions the joint of the right great toe now affected has become of a bright red colour, much swollen, and exquisitely painful.

In addition to the iodide of potassium, the following prescription was ordered:—

R. Extracti Nucis Vomicae, Extracti Colchici Acetici, ā ā, gr. vj.

Alōini, Lupulinæ, Extracti Hyoscyami, ā ā, gr. xij.—*M.*

Fiat massa in pilulas æquales duodecim dividenda.

Sign. Una mane et vespere quotidie sumenda.

To have white fish and fowl, in addition to the common diet of hospital, withdrawing the boiled beef.

14th May.—An improvement in the power of extending the hands, especially the left, has been noticed during the last few days. Gouty affection of foot has almost entirely disappeared. There exists very evidently, however, a chronic enlargement of this articulation, as well as of the corresponding one of the left foot, in which he also admits he has not unfrequently experienced severe pain. Is to-day suffering from a feverish attack. Ordered to keep bed, and omit the medicines prescribed.

19th May.—Quite recovered from the febrile indisposition. Former treatment resumed.

From this date to 1st June continued to progress favourably. On the latter day was again feverish, and complained of palpitation, with pain, in the region of the heart. On auscultation, a bruit, following rather than accompanying the ventricular systole, was audible, most distinctly heard near the xiphoid cartilage. Pulse 120; pains felt in joints of arms and legs; tongue coated; breath foul. The iodide of potassium and pills were again omitted, and after the operation of a purgative, the following mixture was commenced :—

R Potassæ Nitratis, ℥ij.
Potassæ Acetatis, ℥vj.
Aquæ, ℥viij.—Solve.

Sign. Sumat cochleare magnum ex aquæ cyatho sexta quaque hora.

3rd June.—Feverishness continuing. Bruit audible as before.

5th June.—Heat of skin and frequency of pulse somewhat diminished. Bruit very distinct, heard along the whole sternum, but most clearly a little to the left of the xiphoid cartilage. Precordial pain from time to time. Was dry-cupped to-day.

From this date to the 10th was still feverish. Occasionally slight delirium occurred by night. On two or three occasions manifested a tendency to faint, becoming pale, and with the pulse at the wrist very feeble. The urine more albuminous.

11th June.—Decidedly improved. Bruit over heart less distinct. The abnormal sound has now more the character of slight roughness with the first sound. Pulse 108.

14th June.—Iodide of potassium restored in three-grain doses daily. Galvanism to muscles of forearm for a few minutes daily.

18th June.—Completely recovered from arthritic attack.

Ordered as follows :—

R Extracti Colchici Acetici, gr. iv.
Extracti Nucis Vomicae, gr. vj.
Ferri et Quinae Citratis, gr. xvij.
Extracti Gentianæ, q.s.—M.

Fiat massa in pilulas æquales duodecim dividenda; quarum sumat unam mane et vespere quotidie.

23rd June.—Very rapid improvement in the condition of the wrists. Can now extend the hands, though not as yet perfectly. A small blistered surface has been produced over the back of both wrists, and to it half a grain of strychnine applied a few times.

1st July.—Making rapid progress. Believes himself quite able to resume his employment, and is very anxious to do so. No longer complains of articular or muscular pains. Appetite good. Urine of higher colour, density 1.012, still very faintly coagulable. Rhythm, sounds, and action of heart normal. Pulse 74.

In this case we have the usual succession of the phenomena indicative of lead impregnation—the attacks of colic gradually increasing in severity,

then the development of the characteristic form of local paralysis, speedily followed by the epileptic seizures, which emphatically proclaim its gravity; finally, the patient, after repeatedly suffering from gout in the ball of the great toe of right foot, becomes, while under our observation, the subject of an acute arthritic attack, in which the pericardium is evidently involved.

CASE II.—J. H., æt. 37, admitted to Ward V., 8th June, 1862. He worked as a house-painter for more than nineteen years, generally mixing his own colours. For a lengthened period has suffered from pains in the belly, attended by sluggishness of the bowels. Three weeks ago these symptoms increased so much as to compel him to quit his work. Nausea and vomiting occurred about the same time. Has had no passage from the bowels for eight days. The belly is now considerably distended and hard. He suffers much pain, bending forwards and doubling himself up in the endeavour to obtain its mitigation. Has also pains, which he calls rheumatic, in the head, shoulders, and limbs. The patient states that, during the last eight or nine years he has had three distinct attacks of severe pain, attended by much swelling and redness, in the ball of the great toe of right foot. He has been accustomed for a lengthened period to drink pretty freely; and while whisky has been his ordinary beverage, he admits that he has partaken more commonly than his fellows of both porter and ales. The gums present an unusually distinct blue line. There is no paralysis, and no muscular atrophy. He has never had any fits.

Ordered a warm bath, and thereafter to take as follows:—

R. Tincturæ Opii, ℥v.

Olei Ricini, ʒvj.

Aquæ Cinnamomi, ʒij.—M.

Fiat haustus: statim sumendus.

9th June.—Bowels have been moved. Colicky pain, however, continues. The draught to be repeated. Has passed forty-five ounces of urine in the twenty-four hours. It is of normal colour, acid reaction, and of density 1·022, not coagulable.

10th June.—Was ordered the iodide of potassium in ten-grain doses twice daily.

During the next few days the abdominal pain gradually diminished. The castor-oil was repeated daily, or on every alternate day.

16th June.—Was discharged to-day at his own request, the pain in the belly having entirely ceased, but still feeling rheumatism pains. Advised to continue the use of the iodide of potassium for some time, but in smaller doses.

ART. 29.—*On the Co-existence of Tubercle and Cancer.*

By Dr. D. R. HALDANE, Pathologist of the Royal Infirmary, Edinburgh.

(*Edinburgh Medical Journal*, October, 1862.)

Dr. Haldane has never met with a case in which he was satisfied that cancer and tubercle co-existed in an active form. And with respect to the cases put on record by others, he thinks that in some the characters of the morbid products may have been misunderstood, and that in others the tubercle was in a state of obsolescence. In illustration of the fallacies to be guarded against, he relates a case in which a mistake might readily enough have been committed.

CASE.—Mary L., aged 40, was admitted, on account of cough and debility, into the Royal Infirmary, under the care of Dr. Gairdner, on the 22d of April, 1862. She stated that, though not robust, her health had been generally good, but that since the birth of her youngest child (four weeks before admission) she had suffered from cough, accompanied with febrile symptoms. She stated that she had never had hæmoptysis, and had never suffered from pain in the chest.

When admitted she was in a feverish condition, the skin was hot, the tongue dry and cracked. There was much cough, with rather scanty mucopurulent expectoration. On physical examination, there was no dullness on percussion, but the auscultatory signs of bronchitis were present, chiefly on the right side of the chest. About ten days after admission, percussion was found to be markedly dull over the right side. The following was her state on the 3d of May :—

Countenance pallid, no lividity, no flush. Voice broken and hoarse. Respirations, 36. No very marked dyspnoea; lies equally well on either side, or on the back, the latter being her usual position. When closely interrogated, could hardly be brought to admit any pain during the course of her complaint; but after leading questions, referred to the right side as the seat of a little uneasiness. Percussion quite dull over the right side of the chest from above the clavicle to the level of the nipple. Little respiratory sound in front, except above the clavicle, and there chiefly tubular. Sputum, mucopurulent; mucus and pus about equally mixed; pus in flakes, not decidedly globular.

On the 2d of June her condition was the following :—

Patient has occasionally tried to get up of her own accord, but has generally been obliged to lie down again soon. Is now very feeble and pallid; there is scarcely any flush whatever; febrile symptoms much less distinct than formerly. Tongue almost perfectly natural, but retaining marks of former cracking. Has still no complaint of pain; chief cause of suffering is cough, which is fully more severe than ever. The dullness or percussion over the right front is diminished, being replaced in part by tympanitic or dull tympanitic resonance. Auscultatory signs, pretty distinctly those of progressive excavation of right front. Expectoration has been increased in quantity, and has become more and more purulent, but is still frothy, and not distinctly globular in character. Last night, for the first time, the sputa were tinged with a little blood. Has had very little diarrhoea.

She became gradually weaker, and died on the 10th of June.

The opinion entertained of the patient's case during her life was that she was suffering from acute phthisis, causing rapid breaking down of the substance of the right lung. The following were the appearances found on dissection :—

Surface of body very pale; abdomen wrinkled.

On proceeding to remove the right lung, firm pleuritic adhesions were found over the upper two-thirds of the organ; in separating these, a very superficial cavity in the anterior of the lung was opened into. The upper and middle lobes of the right lung were found occupied by numerous communicating cavities exactly resembling such as result from the breaking down of tubercular matter. The walls of the cavities were irregular, coated with a soft yellowish matter, and in many places were crossed by fibrous cords, the remains of obliterated, or nearly obliterated, blood-vessels. In the pulmonary tissues between the cavities were numerous small, opaque, yellow masses. The lower lobe of the lung was in a condition of solid oedema, but contained no deposit. In removing the lung, its root was found to be much thickened by a deposit which surrounded and separated the normal structures. This infiltrated matter was of a pinkish white colour, slightly trans-

lucent appearance, of softish consistence, and presented all the physical characters of cancer; on scraping it, an abundant creamy juice, readily miscible with water, exuded. The growth was found to consist of degenerated bronchial glands, which started from the bifurcation of the trachea and followed the root of the right lung; it extended for about half-an-inch into the substance of the lung, and there ceased abruptly. The normal structures forming the root of the lung were much compressed; the bronchus was converted into little more than a slit, and the pulmonary artery and veins were much diminished in calibre.

The left lung was perfectly healthy, containing no trace of abnormal deposit; the bronchial glands at the root of this lung were also natural.

The liver was healthy. The kidneys were of normal size; in each were several small rounded masses, about the size of pepper-corns, of pinkish colour and rather soft consistence. Other organs natural.

On *microscopic examination* of the creamy juice squeezed from the matter in the root of the right lung, it was found to contain an enormous number of naked nuclei, about $\frac{1}{3000}$ th to $\frac{1}{1500}$ th of an inch in diameter; there was a comparatively small number of rounded or oval cells, pale, but tolerably distinct, and each containing a nucleus similar to those floating loose; finally, there were a few compound granular corpuscles, and some granular matter. On the addition of acetic acid the cells became still paler; the nuclei, on the other hand, were rendered more distinct, but appeared somewhat diminished in size. On examining some of the soft yellow matter from the right lung, which to the naked eye bore a strong resemblance to tubercle, no distinct cells or nuclei could be seen; it appeared to consist entirely of broken down matter, mostly granular, but in some places having a tendency to obscure fibrillation, with some compound granular corpuscles. The structure of the nodules in the kidneys was found to be precisely similar to that of the degenerated bronchial glands in the root of the right lung.

"It must be allowed," says Dr. Haldane, "that this case was in some respects a very deceptive one. Without speaking of the symptoms, the appearances presented on dissection were at first precisely such as are found in tubercular disorganization of the lung,—adhesions of the pleura, a large cavity broken into during removal, the walls of which were lined with a soft cheesy matter and crossed by obliterated bloodvessels, seemed to leave little doubt as to the nature of the case. But when the root of the lung came under observation, its condition was evidently due to a cancerous affection, beginning in the glands, and extending into the substance of the lung. Was this, then, a specimen of conjoined cancer and tubercle? I think not. The microscope showed distinctly the cancerous nature of the glandular disease, but threw no more than a negative light upon the condition of the lung. It must, however, be borne in mind that the histological characters of tubercular deposits are frequently ill-defined, particularly where considerable disintegration has taken place. Accordingly, as the absence of the so-called tubercle-corpuscles could not be considered sufficient evidence of the non-tubercular character of the deposit, its nature had to be decided upon from other considerations. And here a point of great importance was the absolute limitation of the deposit to a portion of one lung. We not uncommonly find one lung in an advanced state of tubercular disease, while the other is comparatively unaffected, but it would, so far as I know, be unprecedented,

to have *absolute* freedom from disease in one lung, while the other was in the condition observed in this instance. Under these circumstances, and as there was no trace of tubercle either in the lymphatic glands or in the intestinal mucous membrane, I had no hesitation in coming to the conclusion that the affection of the lungs was non-tubercular. If not tubercular, what then was it? The idea of cancer naturally suggests itself; but this, too, I think, must be negatived. In a pretty extensive experience of cancer of the lung, I have never seen it produce destruction of the character met with in this case. Cancer is generally found in the lung in the condition of nodules or of infiltrated masses; in but few cases is softening found to have taken place, and when met with it has been rather the result of a process of sloughing than of a comparatively slow and gradual disintegration; softening of cancer, when it does occur, takes place too rapidly to allow the neighbouring blood-vessels to be sealed up. The microscopic appearances were also opposed to the identity of the deposits in the root of the lung and in its substance. Had the growth in the lung been cancerous we should undoubtedly have found cells, or more probably free nuclei, to testify to what had been the original character of the lesion.

"On the whole, I came to the conclusion that the disease in the lung was the result of a low form of inflammation, determining the presence of a fibrinous material which subsequently underwent disintegration. It is now generally recognised by pathologists that all cases of so-called pulmonary phthisis do not result from tubercle, but that some are occasioned by a low grade of the inflammatory process. I believe that this was the case here, and that the pressure upon the important parts in the root of the lung was the determining cause of the lesion. I have more than once seen cases where the pressure of an aneurism on the root of a lung has been connected with very similar appearances, and where the entire absence of tubercle from other organs rendered it highly improbable that the deposit was specific. The absolute character of the lesion is, however, of secondary importance, provided it be admitted that the pulmonary disease was not tubercular; if this be correct, the case narrated will have no bearing upon the question of the co-existence of tubercle and cancer, but it may serve to show how readily, under certain circumstances, an error of observation may be committed."

ART. 30.—*On Graves' Disease.*

By M. TROUSSEAU, Physician to the Hôtel Dieu, Paris.

(*Medical Times and Gazette*, August 2, 1862.)

In a report on a paper by M. Hiffelsheim, on "*Bronchocele associated with Exophthalmus*," recently sent to the Parisian Academy of Medicine, M. Trousseau gives an account of this disease, which account is thus summarized by the Foreign Correspondent of the *Medical Times and Gazette*:—

"M. Trousseau says that the disease which is known as exophthalmic cachexia or bronchocele, or Basedow's disease, should

properly be called Graves' disease, as it was Graves, of Dublin, who first described it in his lectures published in 1835, while Basedow's labours were only given to the world in 1840. In France it was especially Messrs. Charcot, Fischer, and Aran who directed the attention of the Medical Profession to the subject.

"In its usual chronic form, the disease presents three principal symptoms,—viz., exophthalmus, hypertrophy of the thyroid body, and palpitations of the heart. Exophthalmus is generally of an extreme degree, and affects both eyes; in some cases it is not very striking, but the look of the patient imparts so singular a character to the physiognomy that the attention of the observer is at once directed to it. The eyeballs are in constant motion, and if the patient tries to look steadily at a certain object, this is accompanied with difficulty and even pain. The eyes sparkle and fill with tears. Any continued work is painful or impossible; but although in certain cases the eyes are only partially closed during sleep, there is scarcely ever any serious alteration of the conjunctiva and cornea. The second symptom is a tumour at the base of the neck, in the region of the thyroid body, and which chiefly occupies the lateral parts of the trachea. This tumour is smooth, and the colour of the skin unchanged. It is very similar to the bronchocele observed in pregnant women. The tumour is frequently more developed at the right side than at the left. If the hand be applied to the surface, palpitations which raise the whole of the tumour, and movements of expansion, as in an aneurismal sac, are perceptible. The stethoscope shows continuous murmurs, which become stronger during systole; thick veins and arteries are seen on the surface. It is shown by the seat, form, development, and progressive diminution of the tumour, as well as by post-mortem examinations in cases which have proved fatal, that this tumour is due to a general hypertrophy of the thyroid body.

"Regarding diagnosis, the simultaneous existence of exophthalmus and bronchocele are of great importance. These two morbid conditions do not coexist in any other disease; moreover, they augment and diminish simultaneously in each paroxysm, as if they were subject to the same etiological influence. In cases, however, where a cure is in the course of completion or already accomplished, the eyeballs may be completely retracted into the orbit, but there may be traces left of the bronchocele: while in others the exophthalmus persists, but the thyroid body completely disappears.

"The third symptom concerns the heart. All patients complain, at some stage of the disease, of palpitations of the heart, by which the walls of the thorax are violently elevated, the *bruit* being sometimes so loud that it may be heard at a distance. These palpitations are painful, and render all exertion impossible. If they increase, they spread to the arteries of the neck, the thyroid body, and the eyeballs. They are accompanied with headache, and at such times the patient's temper is very irascible and even violent. With every emotion or exertion the palpitations increase, the tumour becomes larger, the eyes brighter and more full of tears. At the same time the radial pulse remains small and feeble, but becomes more fre-

quent. Murmurs are heard at the base of the heart and the vessels of the neck, but not in the arteries of the arm or thigh; while the carotid and thyroid arteries leap at every pulsation.

"According to Stokes, there may be in such cases organic disease of the heart, but this is not a necessary consequence of the malady. He assumes two different varieties; one without affection of the heart, which is most frequent, and the other with such an affection. M. Aran asserted that hypertrophy of the heart was always present; while Messrs. Bouilland, Cazalis, and others could discover no such lesion. M. Trousseau says that, generally speaking, there is no hypertrophy, but that it may sometimes exist temporarily. Moreover, exophthalmic bronchocele does not exclude organic lesions of the heart from other causes, as has been well remarked by Stokes and Vithusen.

"The succession of the several symptoms is as follows:—The patients first complain of the heart; at a later period, the tumour appears and slowly increases. It has often acquired considerable bulk before the protrusion of the eyes commences. M. Trousseau does not think that the exophthalmus is due to the disturbance of the venous circulation by the hypertrophy of the thyroid body, as was asserted by Dr. Taylor; for sometimes both these symptoms appear simultaneously, and in other cases exophthalmus even precedes the enlargement of the thyroid body. If one out of the three principal symptoms mentioned is wanting, which may be bronchocele or exophthalmus, the disease is nevertheless quite the same, which is placed beyond doubt by the secondary symptoms which appear a short time afterwards. These latter consist of disturbances of the intellect, incapability of mental exertion, a modification of the character, irascible temper, disturbance of the function of the stomach and intestines, as well as of the nutrition altogether, great emaciation, nervous cough, and sometimes fever with an intermittent type. Suppression of the catamenia is another important symptom; at first this function becomes irregular, but it is soon entirely suppressed, and at the time when the period should have appeared, all symptoms are aggravated. Re-establishment of this function is the first indication of a cure. If the patients become pregnant, great improvement results, but after parturition the disease generally returns to its former severity.

"There are two forms of this malady; one is acute with frequent paroxysms, and lasting from several months to two years; the other form is chronic, and extends over a number of years. This latter is, however, rare, and its symptoms are comparatively mild, although paroxysms are not quite absent.

"Graves's disease is not a cachexy, such as chlorosis or albuminuria. If anæmia coexists with it, it is only consecutive to the disturbance of nutrition; albuminuria, on the other hand, is a very rare symptom of exophthalmic bronchocele. M. Trousseau believes the disease to be a neurosis, somewhat analogous to hysteria, characterized by local congestions, and having its origin in a modification of the vaso-motor system, *i.e.*, the sympathetic nerve. This opinion is supported by the experiments of Claude Bernard, who has shown

that the section or excitation of this nerve causes not only congestion with elevation of the temperature of those parts of the body which are animated by the irritated portion of the nerve, but that there is at the same time dilatation of the pupils and protrusion of the eyeballs. The palpitations of the heart, and the congestion of the thyroid body and the eyes, are a direct consequence of this, and the diarrhoea, the increased flow of urine, and the profuse perspiration are due to a congestion of the glandular apparatus. The disturbance of menstruation is caused by a deficiency of blood in the utero-ovarian system, and if this returns to its normal physiological condition, either by pregnancy or by menstruation, most of the symptoms of Graves's disease disappear, as if the return of uterine hyperæmia caused the morbid congestions of other organs to cease.

"M. Aran believed that the staring eye was due to the exaggerated contraction of a muscle first described by M. Heinrich Müller, and the existence of which has been affirmed by Claude Bernard. This muscle is analogous by its position and function to the orbital membrane in certain mammalia, especially in the hare. The orbital muscle, according to M. Müller, protracts the eyeball, and has therefore an action opposed to that of the recti and of the orbicularis; and it receives its nervous supply exclusively from the sympathetic. M. Trousseau, however, is disinclined to endorse this theory of Aran's, and believes that a congestion of the eye, analogous to the congestion of the thyroid body, is the true cause of the staring.

"As regards the treatment, the different preparations of iron and other tonics have proved quite useless; they have sometimes even increased the palpitations of the heart, so that it was necessary to discontinue them. Iodine, which had been given for diminishing the bronchocele, aggravates every symptom, and gives rise to paroxysms. On the other hand, digitalis has proved highly beneficial in calming the irritability of the heart, diminishing the size of the thyroid body and the protrusion of the eyeballs, as well as in improving all the secondary symptoms of the disease. At the same time we should endeavour to re-establish menstruation. Special remedies for the secondary symptoms are unnecessary, as these generally disappear if the principal symptoms are relieved. M. Aran has found the application of ice to the heart and the thyroid body of great service; but M. Trousseau thinks that, on the whole, hydropathy, methodically practised, is the best remedy for the disease under consideration."

ART. 31.—*A Remark on Hay-Fever.*

By Mr. W. WHITE COOPER, Ophthalmic Surgeon to St. Mary's Hospital, &c.

(*Lancet*, June 28, 1862.)

The following remarks occur in some lectures on certain points in ophthalmic surgical practice:—

"Each spring," says Mr. Cooper, "brings under my notice cases of that distressing affection, 'hay fever,' one of the usual symptoms

being irritation of the eyes. The treatment found by me to be most beneficial, is the repetition at short intervals of small doses of opium. The controlling influence of opium over the capillaries is well known, and having frequently experienced its power of arresting an ordinary cold, it occurred to me that it might prove useful in hay fever. Two or three drops of tincture of opium should be given every two hours for three times, followed by one drop every two hours till the discharge from the eyes and nose diminishes. The treatment should be continued at longer intervals for three or four days. My object in giving such small doses is to avoid disturbance of the system, or any of the ordinary unpleasant effects of opium. It will be found that the symptoms will yield, the patient being scarcely aware that he is taking opium, to which some persons entertain a strong objection.

"A singular susceptibility to vegetable exhalations was displayed by a gentleman who consulted me during the last autumn for a scratch on one of his eyes received in pushing through a wood. In addition to the injury to the eye, the patient seemed to be suffering from a very severe cold and defluxion from the nose. This ceased during the week he remained in town, and he returned home. After the lapse of a few days he again presented himself with increased inflammation in the eye, and a worse cold than before. On my remarking this, he stated that he could never pass through a wood or thicket without sneezing violently and his eyes watering, and that if he indulged in a favourite amusement, lopping and pruning branches, all the symptoms of a violent cold in the head certainly followed. The same thing occurs if he eats raw green vegetables, as salad or watercresses, but *not* if the vegetables are bleached, as celery. This would indicate that the irritation depends on the presence of chlorophyll."

ART. 32.—*On the Use of Fucus Vesiculosus in Obesity.*

By Dr. GODEFROY.

(*Rev. de Thér., Medico-Chir. and Pharm. Journ.*, September, 1862.)

The use of *fucus vesiculosus* (sea-oak, sea-lettuce) in cases of obesity, was first suggested by M. Duchene-Duparc, in a pamphlet published not long ago. Dr. Godefroy experimented upon himself. He gathered the fucus at St. Malo, where it is very abundant, and had made of it an hydro-alcoholic extract. This extract, he says, is hygrometric; and thus, if it be desirable to administer it in the form of pills, it is expedient to prepare a small number only at a time, to silver them, and to preserve them in a large quantity of some absorbent powder.

"I am," says M. Godefroy, "fifty-seven years old; I am about 5 ft. 6 in. in height; my bones are small, my obesity principally seated about the belly. On the 6th of March, previous to any treatment, I weighed 76 kil. 500 (about 11 stones 10 pounds). From the 6th of March, I took, as uniformly as possible, every day,

three pills, each of which contained 30 centigrammes (about $4\frac{1}{2}$ grains) of the hydro-alcoholic extract of the *fucus vesiculosus*, the first at six o'clock in the morning, the second at ten o'clock in the morning, and the third at five o'clock in the evening, at the commencement of each of my meals, and without making any change in my ordinary mode of living.

"Under the influence of this remedy, my urine became more abundant, more coloured, and more odorous than usual. This was the only phenomenon which I noticed during its use.

"On the 10th of April, after having taken ninety pills, I was weighed; I had then lost 1 kil. 500 (nearly 3 $\frac{1}{2}$ lbs.).

"From the 10th to the 20th of April, I took about two pills daily, one at six o'clock in the morning, and the other at five o'clock in the evening; at this period I resumed taking three pills a day until the 18th of May, at which time, having taken a further number of ninety pills, I was again weighed—taking care to do so at the same hour of the day, and in the same clothing as before. I had then lost 1 kilogramme more, thus weighing at that period not more than 74 kilogrammes. I had thus lost from the 6th of March to the 18th of May, 2 kil. 500 (about 5 $\frac{1}{2}$ lbs.), without any change in my diet or general habits, and without having experienced any inconvenience from the use of this remedy."

ART. 33.—*On the Hereditary Transmission of Tertiary Syphilis.*

By M. RICORD.

(*Medical Circular*, August 13, 1862.)

The remarks which follow are from a clinical lecture delivered in the Hôpital St. Eugénie, Paris, at the request of M. Bouchut, one of the physicians of the hospital, upon a case of diseased palate of doubtful origin. M. Ricord says:—

"She is aged fourteen, and was admitted into hospital about three months since, for a disease of the mouth of recent origin. Her parents died eight years ago. She has one sister, aged nineteen, who enjoys perfect health. She is intelligent, and declares that she has never followed any medical treatment whatever. Her frame is small but wiry; the integument is perfectly free from any trace of scrofulous disease, or scars, denoting previous eruptions of ecthyma or rupia. The most minute investigation fails to detect any morbid appearances about her person, beyond a few small and indurated glands in the sub-maxillary region. There is neither running at the nose nor any symptoms of ozena, and it is, to say the least, extremely improbable that she has ever been exposed to the contagion of glanders or farcy.

"The first and most striking circumstance observable is the nasal resonance of the voice, which indicates some defect of the palate. On inspection of the cavity of the mouth, its condition is found to be as follows: The soft palate is destroyed, and also a

portion of the osseous vault, which is divided by a longitudinal slit, situated a little to the left of the mesial line; the margins of the cleft are irregular, and covered with pale, roseate granulations, disseminated over an unhealthy-looking surface, presenting altogether some resemblance to a cancrroid sore. The incisors are loose, and the incisor bone is also moveable, and affected with necrosis. But the disease does not extend beyond the eye-teeth, which distinctly form its outward limits."

M. Bouchut, conceiving the case to be of scrofulous origin, prescribed arseniate of soda, and tar-water injections, four times a day; the arseniate of soda was exhibited in $\frac{1}{4}$ gr. doses, four times in the twenty-four hours. This method stimulated the digestive powers, and, in some respects, the child seemed to improve. The amelioration, however, was but slow, and, as the diagnosis presented some obscurity, M. Bouchut felt desirous of obtaining M. Ricord's opinion. This gentleman, therefore, examined the patient with the utmost care, and delivered in the theatre of the hospital a highly interesting lecture on the subject.

M. Ricord, after a minute description of the anatomical changes observable, invited attention to a satisfactory circumstance—viz., the circumscribed limits of the mischief, which induced a hope that the naso-palatine osteitis might make no further progress. This form of disease of the bone is extremely common in the adult, in whom, in the vast majority of cases, it points to syphilis. It is less frequent and of more obscure origin in childhood.

"Let us, however, said M. Ricord, for the sake of argument, admit, that, in the present instance, the symptoms are due to a syphilitic taint; in that case, here, as in the adult, they must belong to the class of tertiary manifestations. We will now inquire if this hypothesis presents any degree of probability. In the first place, the age of the patient cannot be alleged as a sufficient reason to set aside the idea of contamination. M. Ricord is acquainted with an instance in which an infant at the breast was thus infected by sexual contact with its nurse; the records of the tribunals abound in similar instances. But tertiaries do not immediately follow the primary sore. Between the two, a connecting link exists, in the shape of secondary symptoms. Now, neither in the recollections of the patient—not altogether to be depended upon, it is true—nor in the inspection of her person, do we find the slightest evidence of any secondary eruptions. This does not, however, authorise us entirely to reject the idea of tertiary syphilis. It is not absolutely indispensable, in order to assert the existence of tertiary disease, to observe the traces of secondary symptoms. Unless these have previously broken out in the shape of ecthyma or rupia, they do not leave any recognisable scars on the integument. The eruption, moreover, may have been situated on the mucous and not on the cutaneous surface. But we may go further, said M. Ricord; conceding that in this case no secondary, intermediate manifestations ever took place, that no mercury was ever exhibited, we are not yet in a position to declare that the affection of the mouth is not due to tertiary syphilis; because the hereditary taint may be handed

down to a child and assume at its first appearance tertiary characters, many years after birth.

"In order to impress the foregoing remarks more fully on his hearers, M. Ricord alluded to the length of the interval which elapses in general, between the primary and constitutional symptoms of syphilitic disease.

"When no mercury has been exhibited, six months seldom elapse without some outward sign of the poison becoming manifest. In general, secondaries appear within three months after contagion; they consist in a sense of general lassitude, neuralgic or rheumatic pains, enlargement of the lymphatics of the neck, falling off of the hair, and superficial eruptions on the skin and mucous membranes accessible to the eye. These symptoms open the scene. Tertiary manifestations do not break out a few weeks only after the primary ulcer; tubercular indurations, nodi, exostosis, deep-seated affections of the osseous, fibrous, or muscular structures, expressive of protracted fermentation of the poison lurking in the system, are seldom observable before an interval of six months, and under the agency of a host of circumstances which hasten or retard its evolution, tertiary syphilis makes its appearance more or less tardily. M. Ricord adduced in illustration the case of a man who contracted a chancre on the occasion of the coronation of the Emperor Napoleon I. in 1804, enjoyed perfect immunity for forty years, and in 1844 presented a tertiary abscess in the cheek, which promptly yielded to the exhibition of iodide of potassium. Professor Sigmund, of Vienna, relates a case in which the soft palate was destroyed by tertiary syphilis nineteen years after a chancre, and brings forward instances of disease of the periosteum, bones, and cartilages, after an incubation of forty-one years. Osteitis and affections of the fibrous and cartilaginous textures are among the latest manifestations of syphilis.

"The laws which govern the evolutions of the syphilitic diathesis in the adult, are entirely applicable to children tainted before their birth. The infant may be born to all appearance healthy, but six weeks afterwards secondary symptoms break out—an untoward circumstance, which too often has led to litigation between the parents and nurses.

"These laws, however, may be modified or suspended in their operation by the influence of mercurial treatment, which retards the morbid manifestations, disturbs the regularity of their succession, and may in hereditary syphilis altogether suppress the secondary connecting link, and cause the disease to make its first appearance in the tertiary form. According to M. Ricord, the child is in the same situation as its parents; if, in the latter, mercury has checked the secondaries, ten, fifteen, twenty years may elapse with perfect immunity from tertiary symptoms. The remark equally applies to the child who, now a branch detached from the tree, was originally nurtured on the same sap, and has derived from it similar tendencies. The treatment which cured secondaries in the parents likewise preserves the infant, but parents and infant remain liable, at a more or less distant period, to tertiary manifestations. This explanation satis-

factorily accounts for certain tumours of obscure nature, which give rise to frequent errors of diagnosis, because, as nothing points distinctly to the concatenation of the symptoms, the surgeon is reluctant to admit the existence of a syphilitic taint not clinically demonstrable, but indicated by the results of treatment.

"Facts of this kind, whatever their interpretation, frequently recur in practice. M. Ricord adduced, in illustration, the case of a lad, aged seventeen, who presented symptoms closely resembling those existing in M. Bouchut's patient. He had never been affected with primary or secondary disease; but his mother suffered before her marriage from a severe syphilitic eruption, the traces of which were still visible; the mercury had succeeded in arresting its progress, but syphilis, though checked in the parent, had induced tertiary symptoms in the son.

"Instances of this description are, as we have said, common, and often cause much perplexity to the surgeon. In conclusion, in the patient who is the object of the present remarks, tertiary syphilis transmitted hereditarily is admissible.

"Now, is it possible to assert that the case is not one of scrofula? M. Bouchut was inclined to believe that the symptoms were merely due to a scrofulous habit, and, doubtless, in its later periods syphilis is closely akin to scrofula. Indeed, Lugol was of opinion that it might positively originate in syphilis, and M. Ricord admits that both taints may be associated; in which case, it is important to discover which is the predominating element. In M. Bouchut's patient, M. Ricord does not consider that it is scrofula. With the exception of some insignificant glandular swellings of the neck, which may depend on the condition of the mouth, no signs of genuine scrofula are here observable.

"But admitting the solitary existence of one or the other disease, no bad result can follow a diagnosis in either sense, because the same treatment is applicable to both. The precision of the diagnosis can here be of importance to prognosis only. Of the two affections, syphilis is not the most serious, and former experiments on the efficacy of iodide of potassium, have established beyond contradiction the fact, that wherever syphilis and scrofula are combined, a cure is effected with a degree of speed, and certainly proportionate to the predominance of the former over the latter element."

In the present case, M. Ricord recommended the adoption of the following measures of treatment:—

Locally, the incisors are loose, osteitis with suppuration, caries and necrosis are present: the incisor bone has become a foreign body, and keeps up the local irritation. Caries generates caries, mortification has a tendency to spread. It is expedient, therefore, to extract the teeth, and watch the detachment of the sequestrum, which should be removed at the earliest opportunity. After this, or even now, the diseased parts should be touched with diluted tincture of iodine, and the following lotion and gargle may be used with advantage:

R. Tinct. iodini, gr. xv.—xxx.;
Potassii iodidi, gr. v.;
Aque destill. ʒvj. M.

Internally, it will be proper to exhibit cod-liver oil, bitters, iodide of iron, and generous food; the child should have healthy exercise in the open air. Under similar circumstances, the waters of Forges, and the Salins brine-baths, are highly beneficial.

In addition to this treatment, more especially appropriate to scrofula, iodide of potassium, the most efficient of all remedies in tertiary syphilis, should also be resorted to. M. Ricord generally administers this drug morning and evening with the cod-liver oil, and the syrup of iodide of iron can be taken in the intervals. The effects of the iodide of potassium require close watching. Eight grains only should be prescribed at first, and if no counter-indication arises, the dose may be increased to fifteen, twenty-five, forty grains, and even to a drachm or a drachm and a half daily.

This plan of treatment will doubtless be instituted in the present case, and we shall take an opportunity of recording its results.

ART. 34.—*On the Successful Inoculation of Syphilitic Blood.*

By M. PELLIZARI, Physician to the Clinique of Venereal Diseases at Florence.

(*British Medical Journal*, May 10, 1862.)

The results of these experiments have been lately published in the form of a pamphlet, by M. Pellizari. "On January 23rd, 1860"—we quote from a leading article on the subject in the *British Medical Journal*—"two young doctors were inoculated with the blood of a syphilitic patient. No abnormal results followed. On February 6th, 1862 (in the presence of all the students), Drs. Bargioni, Rosi, and Passagli, who were perfectly free from all syphilitic affection, were subjected to the inoculation. Blood was taken from the cephalic vein of a female suffering from well-marked secondary syphilitic disease; the bandage, lancet, and cup used being all new. Charpie was soaked in the blood whilst flowing, and then applied to the upper and outer part of the left arm of Dr. Bargioni, the part having been previously denuded of epidermis and incised with three cuts. The same operation was performed on Rosi and Passagli; but in the case of Rosi, the blood was already cold when applied; and in the case of Passagli, it was coagulated. In the first twenty-four hours no change appeared. On March 3rd, Dr. Bargioni perceived in the centre of the inoculated surface, whereon the blood was laid, a slight elevation and a little itching. Professor Pellizari examined the papule, and covered it with dry charpie and diachylon; and examined it also every day. At the end of eight days the papule was of the size of a twenty-centime piece. On the 11th, it was covered with a slight crust, and had a silvery colour. On the 12th and 13th, the crust was thicker, very adherent, and split in the centre. On the 14th, two glands as large as nuts, moveable and indolent, appeared in the axilla; the papule was still indolent, but its sensibility slightly increased. On the 22nd, the crust fell off, and a funnel-shaped chancre presented itself, with elastic and resistant

borders. On the 26th, the chancre was increased in size, and its induration greater. On the 12th April, there appeared on the surface of the body, but chiefly on the sides of the thorax and in the hypochondriac regions, spots of irregular form, and of a rose colour, but giving no kind of inconvenience to the patient. The glandular swellings in the neck were well marked. The erythema spread, and became more confluent, so as to leave no doubt whatever as to its specific nature. It lasted eight days, and pursued a regular course. On the 20th, the cervical glands had increased in size and hardness. The chancre maintained its specific state, and showed no tendency to cicatrization. On the 22nd, the colour of the erythema became decidedly coppery. Lenticular papules were mixed with the erythema; the edges of the chancre were sanguinolent. Mercurial treatment was now begun. From these experiments it follows: *that the blood of a person affected with secondary syphilis and in its acute stage, inoculated on five persons free from every kind of anterior syphilitic disease, communicated syphilis to one of the five.*

"The following is the *resumé* given of the experiments:—

"1. Three or four days after the inoculation, all traces of it disappeared, with the exception of a red colour at the point of the denuded epidermis.

"2. Twenty days elapsed before Dr. Bargioni perceived the papule at the inoculated point.

"3. This tardy appearance of the papule cannot be explained by inexperience or negligence, as Dr. Bargioni was perfectly well acquainted with the characters of the primitive form, such as it appeared in the case related by Waller.

"4. The papule at first retained a dry character. It did not become moist and ulcerated until the ninth day.

"5. The swellings of the axillary glands preceded the ulceration of the papule.

"6. The primitive phenomenon, which produced the syphilis with which Dr. Bargioni is now affected, possessed the characters and followed the course of those phenomena which are the result of the inoculation of constitutional syphilis.

"7. Sixty-five days intervened between the inoculation and the manifestation of general symptoms; forty-three days between the appearance of the papule and the erythema; and twenty-two days between the inoculation and the appearance of the papule.

"It is thus demonstrated that, in a person who has never been affected with syphilis, we can, by means of the inoculation of blood taken from a syphilitic person at the acute period of the secondary affection, produce at the inoculated point a papule, which ulcerated, and was accompanied and followed by all the phenomena proper to an infecting chancre.

"The sceptical may satisfy their doubts, it would appear, by the exercise of their own eyes; for Dr. Bargioni only on the 22nd of last month commenced a mercurial treatment of the disease inoculated upon him, and is no doubt still suffering from the signs of the disease."

ART. 35.—*Remarks on Beriberi.*

By Mr. E. D'ARCY AVEZARD, Zillah Surgeon, Masulipatam.

(Madras Quarterly Journal of Medical Science, April, 1862.)

Mr. Avezard relates two cases of this obscure disease, such as he found it in the Masulipatam jail, and gives an opinion respecting its pathology. "I have intended to show," he says, "I know not whether clearly or otherwise, that beriberi, or at least the disease from which the convicts have been suffering, appears to me to be anæmia, combined occasionally with cachexia, and that in what are called acute cases, the patient in this state and with perhaps an already hypertrophied heart catches cold, and is attacked with rheumatismal pericarditis. The scared aspect and fear of sudden death, I consider to be peculiarly characteristic of this. Several died of alarm at the death of others. One man told me that a sort of Brahmin parca had appeared to him, and told him that they would cut his thread of life next. He was saved by a *ruse* I adopted. I have never, as I have said, met with any symptoms combined with those I have mentioned referrible to lesion, or injury, or pressure on the spinal marrow either here or during five years I spent in Burmah. I have been especially careful in looking for such symptoms; the patients of course are frequently unable to stand from fright, weakness, and the weight of their chains—nay, they sometimes walk astraddle in consequence of their gyves, but they have perfect co-ordinating power over their limbs. On one occasion a patient came for admission, and threw himself at my feet declaring that he had no power in his legs. I told him that I could see from his face that he was ill enough, and should admit him, but I thought he could walk if he tried. After some persuasion he was raised to his feet, and walked without assistance, straight up to me from one end of the verandah to the other. This man was in, what I considered, the worst stage, indeed he died the next day, and I did not think it necessary to try any more in this manner; I have satisfied myself, as I hope I may have satisfied any who may think it worth while to read this, that there was no paralysis.

"I do not of course pretend to suppose that paralytic symptoms do not occur when many medical officers appear to have observed them, but they have not occurred in my practice. I have frequently seen loss of power in the lower extremities, twitchings of the muscles, &c., the result of fever, diarrhœa, and other unknown debilitating causes. I have seen these combined with œdema, but then there has been also wasting of the muscles and albuminous urine. Fever is not at all common in this jail, nor is diarrhœa. I need scarcely mention perhaps that many of these symptoms, particularly the state of the heart and pulse, may be and are stimulated in Sepoys by the use of intoxicating drugs and the abuse of tobacco. Should I ever have to treat a case of beriberi accompanied with paralytic symptoms, I should expect to find much benefit from the use of ergot of rye, which I have found very beneficial in the kinds of paralysis just mentioned.

The two cases referred to are these:—

CASE I.—Beriberi.—Kistnadoss, aged 24, Gentoo prisoner; sentence two years; in gaol eight months. Sept. 2, 1859: This man, a native of Vellore, was admitted into the jail hospital with swelling over the tibiae, and numbness in the palms and soles; pulse quick, compressible, and moderately full; urine scanty and high coloured; tongue flabby, and slightly blanched; bowels costive; palpitation of the heart; sounds heard all over the chest. *R* Pulv. jalapæ co. \mathfrak{z} i. statim. *R* Gin \mathfrak{z} ss., potass. acet. grs. v., aquæ \mathfrak{z} iiij., ter in die repetenda. Diet—spoon. Bread, 1lb.; mutton broth, 1lb.; milk, 2 pints.

3rd: Bowels moved freely by the medicine; he voided his urine freely five or six times; the oedema has nearly subsided; patient states that he feels well; but complains still of numbness. To be kept as an out-patient. 14th: Re-admitted with the former symptoms of beriberi. Repeat as above. 16th: Great difficulty in breathing. To have an enema of castor-oil; sinapism over the heart. 17th: All the symptoms increasing. Emp. lyttæ over the cardiac region. Repeat the gin mixture till the pulse is raised. *Vespere*: He got a little better after the blister and medicines, but became alarmed; difficulty of breathing increased. 18th: Died at half-past seven in the morning. *Post-mortem*—No remarkable appearance in any of the organs except the heart, which had suffered from hypertrophy with dilatation.

CASE II.—Beriberi.—Bala Naik, aged 30, Oria caste, prisoner; sentence ten years; native of Goomsoor; in jail two years and three months. Sept. 2d, 1859, admitted with oedema over the tibiae, and slight numbness all over the body; bowels regular; urine scanty, high coloured and acid; tongue very flabby and blanched; sighing breathing; heart sounds normal, but extensive puffiness in the epigastric region; pulse weak, small, and 90; respirations 35 in a minute. *R* Gin \mathfrak{z} ss., potass. acet. grs. x., aquæ ad \mathfrak{z} iii., ter in die capienda. Diet—bread, 1lb.; mutton 1lb., made into broth; milk, 2 pints.

3d: Passed his urine freely five times,—the quantity could not be ascertained; bowels moved twice; the whole body is now puffy, and the patient complains of pain at the pit of the stomach; he could not be made to drink plenty of water. Repeat the remedies. 5th: Altogether better. Repeat. 7th: Tongue clean; pulse good; no swelling; urine still high coloured, and acid. Repeat. 10th: Complains of difficulty of breathing. Repeat. 12th: No swelling, but tongue very white; he never drinks water unless when I am standing by, and then only a few drops; states that water makes him sick. Repeat. 13th: Vomiting at every teaspoonful of medicine. *Acidi hydrocyanici* dil. \mathfrak{m} i., aquæ \mathfrak{z} i. ter die; given in milk.

14th: Pain in the right side; no swelling; liver seems enlarged. Vomiting continues. Blister over the region of the liver. 15th: Still vomiting; pulse small and thready; died at ten p.m. 16th: *Post-mortem*—Liver somewhat hard and congested; lungs frothy and covered with emphysematous spots; heart, eccentric hypertrophy; weighed 12½ oz.; kidneys small and contracted; the stomach was full of an acid liquid.

SECT. II.—SPECIAL QUESTIONS IN MEDICINE.

(A) CONCERNING THE NERVOUS SYSTEM.

ART. 36.—*Two Cases of Delirium Tremens successfully Treated by the Iced Bath.*

By Dr. SAYRE.

(American Medical Times, March 8, 1862.)

Dr. Sayre says that he has used the ice-bath several times with the most satisfactory results, and gives two cases, the first from his own practice, the other from that of a friend :—

CASE I.—I was called about 11 P.M. to one of our fashionable hotels, to see a gentleman with delirium tremens. He was under the care of two of the best physicians in the city, and yet he was unable to be composed. Had had no sleep for some time, was perfectly wild, great muscular tremor, and jactitation; pulse 160. He was placed in the ice-bath, and retained there 10½ minutes, when he became quiet; pulse 76. He was then placed in bed, and almost immediately dropped asleep. The nurse was directed to repeat the bath in case he again became wild; but strictly cautioned about the danger, and the necessity of carefully watching the pulse, in order not to produce too great exhaustion. The next morning I called in consultation at 10 o'clock, and found the patient had gone to business. The nurse stated that he slept quiet until 4 A.M., and then began to talk a little wild; he put him in the bath for three minutes, when he became quiet and was put in bed; he immediately fell asleep, and got up at 8 o'clock, perfectly well, ate his breakfast, and went down town to business.

It is only necessary to refer to the travels of any person in the arctic region, to learn the powerful sedative effect of intense cold; in fact, it is impossible to rouse them up and prevent them from going to sleep. Now this is the great object to be produced in delirium tremens, and in the application of cold we have an agent more powerful than opium, and equally safe if carefully watched.

CASE II.—John Wilson, a native of England, 45 years of age, blacksmith by trade, has been in this country fourteen years; he has an excellent constitution, and is remarkably strong and vigorous; was sent to the Workhouse January 19, 1862. Jan. 20th.—Showing no signs of delirium, he was set to work. On the evening of January 22nd, he became so delirious that we were obliged to place him in a cell by himself, with no medical treatment, for I wished the height of his delirium to have been attained, that I might give the ice-water a fair trial. He became gradually worse until the evening of January 23rd, when it became necessary to place a strait-jacket on him. His delirium continued to increase during the night so much, that we were obliged to tie him down. January 24th.—He was now as wild as it was possible for him to be. I had the bath prepared, and sent for Dr. Clark, of the Almshouse. Half-past 8 o'clock A.M.—The strait-jacket was now removed, and his lungs examined by Dr. Clark and myself, and found perfectly healthy; he was stripped, and placed in the bath-tub, where he was kept nine minutes; the ice was broken into small pieces, and dropped in during the whole time; temperature of the water 38°. His pulse was now 102 beats per minute. First minute, no change perceptible; 2nd minute, no change perceptible; 3rd minute, pulse stronger,

and not so frequent; 4th minute, sedative effects very perceptible; 5th minute, pulse 100; 6th minute, sedative effects more marked; 7th minute, pulse 90; 8th minute, pulse 80; 9th minute, patient perfectly quiet. He was now removed from the bath, rubbed dry, and placed in bed, well covered up. Ten minutes after, pulse 72; he lay quiet; talks perfectly rational. Nine o'clock, pulse 85; has stopped talking, and is perfectly quiet. He remained quiet until 1 o'clock P.M.; did not sleep; then symptoms of delirium again began to show themselves, and increased rapidly until 8 o'clock, P.M. He was again placed in the bath; temperature of the water 38°; pulse 82. He was kept in the water this time twelve minutes. Third minute, sedative effects marked; 4th minute, pulse slower; 6th minute, pulse 64; 11th minute, pulse 50; 12th minute, he was now on the verge of syncope, and gasping. I immediately removed him from the bath, had him rubbed dry, and placed in bed, when he soon went to sleep. January 25th.—Slept well all night, ate his breakfast, and has again gone to sleep. Jan. 26th.—Slept well last night. Jan. 27th.—Eats heartily; no symptoms of tremor remain. Jan. 28th.—He has gone to work, perfectly well. I am confident that if I had continued the first bath until I had made a more decided impression upon him, there would have been no occasion for the second one; but it was the first time I had ever seen anything of the kind, and I was naturally afraid of so powerful a remedy.

ART. 37.—*On Heat-Apoplexy.*

By Dr. H. CLARK, Assistant-Surgeon 5th Brigade of Horse Artillery.

(*Indian Annals of Medical Science*, July, 1862.)

Dr. Clark employed artificial respiration, on Marshall Hall's plan, in these cases, in conjunction with cold affusion, and with apparent benefit. None of the cases were slight. The chief symptoms were insensibility, hot skin, impeded respiration, full and frequent pulse, sometimes visible pulsation of the more superficial vessels, and usually insensibility of pupils.

CASE I.—Private W. Macmillan, æt. 22, admitted 12th June, 1859.

This patient was admitted about 12 P.M. When seen he was perfectly insensible; there was great heat of surface, tremendous throbbing of the temporal vessels, laboured and irregular respiration, full and frequent pulse. A comrade said that, to the best of his belief, patient had been an hour and a half insensible. Cold affusion was freely and repeatedly employed, to the whole body, and head and neck. Marshall Hall's plan of artificial respiration was used for a long time; and almost at the commencement of the treatment, a couple of drops of croton oil were placed on the back of the tongue. The coma was very deep, and the patient struggled a good deal. In less than three hours, the pupils became sensible, the skin equally cool, and the pulse soft and subdued. There was repeated vomiting too; and the raised pulse and heat of head had gone and returned several times in the above period. He was quite rational at 7 A.M., but for a day or two there remained a tendency to raised pulse and hot skin. No other means were used except such as were calculated to keep the patient cool and his bowels open. He was discharged on the 17th.

CASE II.—Private Alexander Moodie, admitted 13th June.

This man fell off his horse while at riding-school early in the morning.

On being admitted into hospital about 5 A.M., he had intense heat of skin, frequent and strong pulse, great throbbing of the carotids, insensible pupils, and complete insensibility otherwise. Cold affusion was promptly employed, with Hall's method of artificial respiration; and a couple of drops of croton oil were placed on the back of the tongue. He recovered his sensibility about half-past 9 A.M.; and by half an hour later both pulse and skin were natural. As in Case I., the pulse and the temperature of the skin had been very prone to rise after being reduced; and there was more or less of this for a few days subsequently also. He was discharged on the 19th. Exposure to a breeze, proximity to a tattie, *maintenance* of coolness, and the use of means to open the bowels and cause diaphoresis had constituted the remainder of the treatment.

CASE III.—Private P. Henessy, æt. 22, admitted 5th September, 1859.

Sept. 26th.—While on the march on the evening of the 4th from Goojerat (a march which was begun about half-past 4 P.M., when the sun was still well up), this man was found by the roadside insensible, rather hot, and with somewhat raised pulse. The cold douche and artificial respiration were employed; and he was so far recovered as to be able to talk pretty coherently at the end of the march. About 3 P.M. yesterday I was called to see him in his tent, where he had been ill for about an hour and a half, with symptoms similar to those which he had the night before. The same means were again used to bring him round, and a couple of drops of croton oil were placed on the back of his tongue, but would seem not to have been swallowed. When water was put to his lips he would swallow it ravenously, biting the edge of the vessel containing it. At other times he would tumble violently about, apparently wanting water. Otherwise he seemed unconscious of what was going on. To-day he is quite free from any abnormal symptoms, except constipation. He was discharged on the 8th.

CASE IV.—Private D. Mahony, æt. 22, admitted 24th June, 1860.

This patient had been feverish for a day or two, and had had pain in the cardiac region for a couple of months. Auscultation detected a loud murmur accompanying the first sound of the heart, most intense about the mitral valve. At a subsequent visit at 10 P.M. of the 24th, there was intense heat of skin, and bounding pulse. A little before morning gunfire of the 25th, he fell off his bed and was found with hot dry skin, strong irregular action of the heart, abdominal respiration, strong pulsation of the carotids and at the epigastrium, and a soft rather full pulse. The cold douche and artificial respiration were employed by the apothecary; and when I saw the patient an hour afterwards, he had a pretty natural skin, respiration tolerably free from moaning, pulse natural, pupils of natural size but insensible to light. He became sensible about 9 A.M., but remained in hospital for six or seven weeks, suffering from cardiac and hepatic symptoms.

While well aware how injudicious it is to draw general conclusions as to the efficacy of a plan of treatment from the results of a few cases, I must confess to a belief that, under prompt and appropriate treatment, heat apoplexy is not necessarily so fatal an affection as has sometimes been supposed. It seems to me that, if we can see the patient betimes, there are few formidable diseases so amenable to treatment, few in which the pleasure of saving a fellow-creature's life can be more surely gained.

ART. 38.—*Recovery after Apoplexy of the Pons Varolii.*

By Dr. E. BROWN-SÉQUARD.

(Medical Times and Gazette, April 26, 1862.)

The following case is one of extreme rarity. It is interesting, too, for other reasons besides its rarity. Hæmorrhagic effusion in the pons Varolii is, in the great majority of cases, immediately fatal, and yet this patient had the attack nineteen years ago, and had all the time been slowly recovering.

The patient is a man, aged 58. He is intelligent, and his memory and mind seem to be unimpaired. At the period of the attack (about the age of 39), he was the editor of a newspaper, and had gone through much mental toil in that post. He was, however, he believed, apparently in good physical health. Whilst writing at his desk he was seized with a "fit," in which he lost his consciousness. His statements as to whether or not he was convulsed are very dubious. Dr. Brown-Séquard inquired particularly if his breathing had been affected in the fit, but the man denies that this has ever been the case, but as he was, he says, for two hours insensible, his answer to this question also is doubtful. On recovery from the insensibility, he found that he had lost sensation and the power of motion in all his four limbs, and also total loss of the power of speech. His face also was paralysed, both as to sensation and motion on both sides; but he thinks that the face was drawn a little to the right. He never had dropping of either upper eyelid, but saw double (paralysis of the sixth pair) both to the right and the left, and even now he sees double in these directions, and cannot move the eyes quite so far outwards as natural. From the time of the fit up to the present time he would appear to have been gradually recovering. The sensation and motion in the face and arms are now almost perfect, but were absent for seven years after the attack, but the legs are still much impaired and he shuffles them along, supporting himself on crutches. There is still impaired action of the external recti, and the pupils are contracted.

In a clinical lecture, containing many interesting observations bearing on this case and the subject of lesion of the pons Varolii, Dr. Brown-Séquard said that the diagnosis of affections of this part of the brain could be made with greater certainty than of any other part, the symptoms produced being most definite and characteristic.

In this case there could be no doubt but that the lesion was situated in the middle line in the pons Varolii. He illustrated by a diagram the decussation of the facial nerves, and of the motor branch of the fifth, and of part of its sensitive branches. He showed that the greater part of the fibres of the sensitive division of the fifth passed down into the medulla oblongata, instead of upwards into the brain, as do the other fibres; and that in this part of the nervous system the motor and sensitive fibres were not blended to the same extent as they are in the cord; and thus that here there might be injury to one set only, producing paralysis of motion or of sensation, as the case might be; but in the cord, lesion producing

paralysis of motion always produced also, to some extent, affections of sensibility. In the case of this patient, the subject of the clinical remarks, he said that both sensation and motion were involved, from the extent of the injury. He showed how injury to one side of the pons Varolii might produce paralysis of both sides of the face and of one side of the body. Thus, in an injury on the right side, the facial nerve arising here and going to the left side of the pons, and thence to the left side of the face, might be injured *before* it crossed, and by the extension of the same injury the other nerve might be implicated *after* it had crossed. The double vision was due to implication of the sixth pair, which, arising from near the floor of the fourth ventricle, decussate in the pons. He then passed in review the various circumstances which established the diagnosis of disease in the middle line of the pons Varolii. It was clear, he stated, that it was above the origin of the nerves to the limbs, and above the facial and the sixth; but why, it might be asked, should it not be even beyond these in the corpus striatum and thalamus opticus, or in the crura cerebri? If in the crura cerebri, there would in all probability have been an affection of the third or motor oculi nerve, of which in this case there was no history. Then again, there would have been probably rotatory movements, as observed in experimental injuries of this part. Apoplexy into the corpus striatum and the thalamus opticus on one side, would not be followed by loss of motion and sensation on both sides of the body; and again, it is not possible that there would be that extensive loss of sensation of the face which the patient had had for some years; for, as he pointed out, the great part of the sensitive division of the fifth does not pass higher than the pons, and yet in the patient's case the parts supplied by this nerve were deprived of sensation.

ART. 39.—*Parenchymatous Infarction of the Brain in Chronic and Acute Forms of Insanity.*

By Professor ALBERS.

(*Virchow*, xxiii. 1, 2; *Schmidt*, No. 8, 1862.)

This disease is characterized by a deposition of amorphous, horny, albuminous masses, between the normal elements of the brain tissues, with unequal development of the blood-vessels of the affected part, which frequently invades the whole organ, and proves fatal by paralysis of function. The brain is rendered tough, especially the white substance, the ventricles compressed and containing almost no serum; the symptoms are headache, irritability, restlessness, *slow* pulse. Unlike inflammatory affections, this disease does not cause local nervous symptoms. It was first observed by Albers in cases of typhus; afterwards he saw it also in two insane persons, one a melancholy, the other a demented patient.

Infarction of the brain is of two kinds: the scrofulous and the typhous. The first occurs in ill-developed, irritable, scrofulous subjects; it affects children and adolescents only: it interferes with mental development, and predisposes to inflammations of brain and

membranes. Insanity of a monomaniacal character appears during the years of development; this is sometimes caused by anti-scorfulous remedies. To this class belong both acute hydrocephalus, and also those cases which commence with symptoms of intermittent gastric fever, and end in chronic hydrocephalus. Typhous infarction occurs in cases of typhus which are attended with delirium and sudden collapse, and which die unexpectedly; even if recovery take place some form of insanity usually supervenes, and is almost never cured. Infarctions of the brain which do not end in complete recovery occasion changes into connective tissues, such as occur under similar circumstances in the uterus and the liver; and these changes may be general or partial.

ART. 40.—*Temperature of the Surface, especially of the Head, in the Insane.*

By Professor ALBERS.

(*Allg. Zeitsch. für Psych.*, xviii. 1861; *Schmidt*, No. 8, 1862.)

Albers finds, by numerous experiments, that the average temperature on the temples is 24° — 25° , (Réau.), behind the lobe of the ear 26° — 28° , under the neck 29° , in men between the ages of 22 and 35. The skin over the muscles is somewhat warmer than that in the neighbourhood; and the right half of the body is usually a little warmer than the left. In a young man, aged 24, affected with religious melancholy with great excitement, the forehead had a temperature of 24° — 25° , the temples of 2° lower, in the average, than the other parts. In imbeciles, the temperature of the head is not different from that of other insane persons; but in their periods of excitement an increase of temperature is noticed, which is greatest on the temples, but which also shows itself in a less degree in other parts. A diminution of the difference between the heat of the temples and that behind the ear indicates an increase of the temperature of the head.

ART. 41.—*On the Use of Nicotine in Tetanus, and in Cases of Poisoning from Strychnia.*

By the Rev. SAMUEL HAUGHTON,

(*Dublin Quarterly Journal of Medical Science*, August, 1862.)

In a previous volume (XXXI.), we directed attention to the results of some experiments made by Mr. Haughton, with the view of showing that strychnia and morphia are mutually counteractive, at least in frogs: on the present occasion we have to relate the particulars of two cases of tetanus, in which, at Mr. Haughton's suggestion, nicotine was fairly used; one of the cases being in Dr. Steevens' Hospital, under the care of Mr. S. A. Cusack and Dr. Croker, the other at the Adelaide Hospital, under the care of Dr. Alfred Hudson. The cases were brought before the College of Physicians in Ireland.

CASE I.—*Traumatic Tetanus, treated by Nicotine.*—Patrick M'Garry, aged 34, a farmer, was admitted into No. 1 Ward, Dr. Stevens' Hospital, on the 29th of January, 1860, suffering from a severe and extensive burn. On Sunday morning, the 29th, at 3 A.M., on his way from Blanchardstown, his native place, to Dublin, he lay down on the wail surrounding a limekiln to sleep, which he did for two hours; but at five o'clock, by some mishap (according to his own statement, uninfluenced by drink), his lower extremities and hands came over the pit of the kiln, and were dreadfully burned.

On examination, the injury was found to occupy a very large extent of surface. Both legs, both feet, and both hands, with the penis and scrotum, were found to be implicated; the muscles, fascia, and soft parts of the feet and legs in particular were in a very bad condition; the left limbs were more severely burned than the right, a fact which is easily accounted for by the way in which he lay at the kiln. The constitutional symptoms in his case were:—Collapse, drowsiness, thirst, delirium, and repeated and violent rigors; the surface was pale and extremities cold; pulse feeble, 88 to 90; heartburn was experienced; and at a later period continual twitching of the muscles, with violent spasm of same, followed finally by well-marked tetanus. He had no vomiting, and after the 3rd of February did not complain of pain.

3rd February.—He complains of severe stinging pains, running from the pit of the stomach and pelvis to the toes; and this day showed the first tendency to delirium and rigors, which last from 30 to 40 minutes; pulse 88, and feeble. He is annoyed by disagreeable heartburns. Took castor oil this morning, which had good effect.

6th February.—Last night the slough began to separate, and this morning he was seized with tetanus, almost closing his mouth, and rendering it impossible for him to open it wider than would admit a spoon: it has to be kept open by a plug of wood. In other respects he has been much the same since the 3rd.

8th February.—He is in a very dangerous state to-day: at intervals of about an hour each he has a very violent spasm.

At 8h. 40m. A.M. he was visited by Professor Haughton, at which time his pulse was 130. Mr. Haughton gave him one drop of nicotine (0.6 gr.). This had the effect of lowering the pulse to 105 at 9h. 5m. A.M., and of rendering the respiration fuller and less frequent; and at 9h. 50m. A.M. the nicotine had lowered the pulse to 92–88.

At 10h. 55m. A.M. he got one drop of nicotine. Before this the pulse had been 112; shortly after the dose it fell to 92.

At 12h. 20m. P.M. had a very violent spasm; and at 12h. 55m. P.M. got one drop of nicotine. The pulse had been 116, and was lowered, as before, by the nicotine.

At 1h. 40m. P.M. had a very violent spasm, pulling his bedclothes with all his might.

At 1h. 50m. P.M. pulse very quick, and intermitted, ranging from 112 to 150.

At 2 P.M. pulse 112. For the last 20 minutes his breathing has been very rapid, and greatly impeded, owing to mucus deposited in the bronchial tubes, for the absorption of which he has iodine rubbed over the upper part of the chest.

At 2h. 10m. P.M. had a very violent spasm, just before which he was conscious, answering indistinctly when spoken to. In addition to the tetanic spasms, he has had continual twitching of the muscles yesterday and to-day.

At 2h. 40m. P.M. had a very violent spasm.

At 2h. 45m. P.M. expired.

The effects of the nicotine observed in this case were the following :—

1. The immediate relaxation of the spasm of the muscles of expression, of respiration, and of deglutition.
2. The cessation of delirium, and feeling of relief from agonizing pain.
3. The lowering of the pulse from 130 to 88 per minute.

CASE II.—*Idiopathic Subacute Tetanus, caused by exposure to cold; treated by Nicotine.*—Arthur Kershaw, aged 40, gardener, was admitted into the Adelaide Hospital, January 2nd, 1861, under care of Dr. Hudson. He stated that the nature of his occupation exposed him to all kinds of weather, and consequently he received several severe wettings during the past winter. The last of these occurred a short time before Christmas. He did not experience any immediate ill-effects from that wetting; but early on Christmas-day, whilst standing beside the canal looking at the skaters, he was suddenly seized with cramps and pains in his lower extremities. He described these sensations as commencing in the loins and passing downwards, both in front and behind, as low as his knees. This attack was not very severe, lasted about an hour, and when it was over he was perfectly free from pain. The same night he had another attack precisely similar to the first, but rather more severe. From that time the spasms increased both in frequency and intensity, but did not occur with any degree of regularity.

When seen by Dr. Hudson, his condition was as follows :—He was lying on his face in bed, his legs and thighs forcibly extended and fixed. The erector spinæ muscles, the glutei, and those of his thighs were spasmodically contracted, hard, and rigid. The adductors and tendons of the hamstrings, in particular, stood out like tense cords, and the muscles themselves could be seen quivering under the skin; this condition was next manifest in his left thigh, and he said it had been so from the commencement of the attack. His legs, however, were not affected; his abdomen was tense and hard, and he complained of pain about the ensiform cartilage, caused, apparently, by the spasms in the recti muscles. Slight relaxations occasionally took place, but during the time he was being examined there was no complete remission; pressure over the spines of the superior lumbar vertebræ appeared to cause slight pain, but did not increase the spasms. The agony he suffered during the occurrence of these appeared to be excruciating. In the partial intermissions that took place, he was able to describe his sensations, and it was thought, from the manner in which he said he walked, that his left leg was paralysed. He stated that his appetite had been good up to the previous day; that his bowels had been regularly moved; and that he had passed his urine without any inconvenience.

He was ordered to be cupped on either side of the tender part of the spine, to have hot stupes applied immediately afterwards, and to take the following every hour—a powder containing one-twelfth of a grain of calomel, and a grain of James's powder.

At one o'clock the same day, after he had been cupped, his pulse was 84, full and labouring; the spasms were as severe as in the morning, but not so frequent. When they occurred he obtained most relief by being placed on his feet and allowed to sink gradually on his knees. It then became apparent that the inability to move his left leg which he had spoken of in the morning arose, not from paralysis, but from rigidity of the entire limb. At seven o'clock in the evening he seemed quieter; the spasms were more frequent but not so severe.

January 3rd.—The spasms and pains continued without diminution; they occurred so frequently and with such violence during that night, that he was unable to obtain any sleep. They had extended this morning to his

legs, the muscles of which had become as hard and rigid as those of his thighs and abdomen. He was observed to hiccup once, and he stated that he had done so two or three times during the night. His pulse was 96, but very irregular, both in rhythm and fulness. The powders were ordered to be omitted and the following pills to be substituted—calomel and James's powder, twelve grains; extract of belladonna, four grains; extract of hyoscyamus, a scruple. To be divided into six pills, and one to be taken every third hour. A fetid and terebinthinate enema to be administered immediately, and a long narrow blister to be applied on either side of the spine. At seven o'clock he was asleep, and it was not judged expedient to awaken him.

January 4th.—There was no appreciable alteration in the character or situation of the spasms. The patient appeared weaker, but said he suffered as much agony as ever. There was a permanent flush on his cheeks and forehead. His pulse was 120, but regular. He said he had hiccuped several times during the night, and he was frequently observed to gulp, as if flatus was coming off his stomach. The enema produced several copious evacuations. The pills to be repeated, with the extract of belladonna increased to one grain in each. The blistered surface of the spine to be dressed with an ointment composed of 4 drachms of muriate of morphia to 4 drachms of lard; 1 drachm of mercurial ointment to be rubbed in at the inner side of each thigh. Subsequently Dr. Duncan saw him, in conjunction with Dr. Hudson, and the patient's tongue being found brown, dry, and fissured, he was ordered the cardiac mixture, 2 ounces to be taken occasionally; brandy to be administered, if necessary, and a large, hot, bran poultice to be applied to the spine.

January 5th.—During the night the patient became suddenly delirious, and afterwards passed into a state of coma, from which he was roused by the administration of stimulants. Sinapisms were subsequently applied to the soles of the feet. In the morning he appeared quiet, and did not complain of much pain, but the spasms continued, with very slight occasional relaxations. Although not delirious, he was not quite rational, and sometimes spoke rather unconnectedly. His tongue was not so brown or dry as on the preceding day. His pulse 100, regular, but weak, and his pupils slightly dilated. His pills were stopped, and others substituted, containing calomel, camphor, antimonial powder, and extract of hyoscyamus, of each one grain, of which he was to take one each second hour.

January 6th (Sunday).—He appeared somewhat better, but spoke so incoherently, that it was impossible to ascertain how he felt. The condition of his limbs, however, was unchanged. His pulse 96. He had been very unmanageable during the night; he got out of bed, and attempted to stand, but fell, striking his back against the rail of the adjoining bed.

January 7th.—The delirium was increased, pulse 84, tongue moist, but rough and white in the centre. The rigidity of his limbs was not in the slightest degree diminished. He had been very violent during the night; got out of bed, and insisted on lying on the floor. A severe purging had come on, and there was a mercurial fetor from his breath.

January 8th.—The preceding night it was found necessary to remove him into a ward by himself, in consequence of the violence of his delirium. During his removal, the muscles of the upper part of his back and those of his neck showed a tendency to participate in the spasmodic action. This was manifested in a slight attack of opisthotonos, which lasted for a couple of minutes. An enema of morphia in decoction of starch was administered, and a blister was applied to the nape of his neck. After these measures he became quiet, but there was no relaxation in the spasms of his limbs. When seen in the morning, he was quite delirious; speaking loudly and con-

tinuously, and not ceasing even when spoken to. He continued in that state from five o'clock in the morning until noon, when he gradually became quiet. His pulse was 84.

At the suggestion of the Rev. Professor Haughton, Dr. Hudson determined to try the effect of nicotine. That medicine was therefore administered four times during the day, according to the former gentleman's directions, and with the following results:—At two o'clock, the patient, having sunk into an uneasy sleep, was awakened. Half a drop of nicotine, which is equivalent to three-tenths of a grain, was administered in 2 drachms of wine and water. His pulse was 80, but rose within ten minutes up to 88. At half-past three, when he was next visited, his pulse was 78, and he was bathed in a profuse but clammy perspiration. At half-past five, his pulse being still 78, the nicotine was repeated in the same dose. The pulse shortly afterwards rose to 100, and it was beating at that rate at six, seven, and eight o'clock. Immediately after the administration of the first dose, the abdominal muscles became manifestly relieved, and the abdomen rose and fell to a nearly natural extent in breathing. The muscles of the limbs, however, were still rigid. Towards the evening he became quite rational, and when visited at half-past eight, he was sleeping calmly. When awakened, he was in perfect possession of his senses; his pulse 78; his tongue white, but moist, and his pupils, which had been much contracted during the day, were dilated to a natural extent. His urine was tested and found neutral, but when allowed to stand for some time, phosphates in abundance were deposited. At nine o'clock he got the third dose, but this did not affect his pulse, which remained at 78 until midnight. He then got the fourth dose, and shortly afterwards his pulse rose to 80, and did not alter during the night.

January 9th.—This morning he appeared improved in every respect. He had slept well, and there had been no return of the delirium. Although he still complained of pain during the presence of the spasms, he said it was not nearly so severe as before, and the intervals between the spasms were growing much longer. The profuse sweating still continued. At eleven o'clock he got the fifth dose, his pulse being then 86. The sixth was administered at five o'clock, the seventh at eight, the eighth at midnight; his pulse, during the day and night, ranging from 78 to 82. From the time that he became rational, his strength was kept up by beef-tea and small quantities of brandy, administered at intervals during the day.

January 10th.—This morning the improvement in his condition was remarkable. He could move his arms freely, without inducing spasms. These seldom attacked him, and even when they did, the pain, in comparison to what he had suffered, was trivial. He was able to move his legs and bend his knees a little for the first time. His spirits rose, and he began to feel hopeful. During the intermissions the muscles of his legs were perfectly relaxed, and those of his thighs were not quite so tense as they had been. The sweating continued, and he said his appetite was returning. The dose of nicotine was increased to three-quarters of a drop, or nearly half a grain; and the first of these altered doses was given at 11 o'clock A.M., his pulse being 90. In half an hour it was 96. At two and at five, when he got the second and third doses, it was still 96. At eight o'clock he was not so well as in the morning. The spasms had become a little more frequent and painful, but yet not anything like so severe as they had been; and during the intervals the muscles, even those of his thighs, were perceptibly softer and less rigid. He seemed somewhat depressed and anxious, and complained greatly of thirst; his pulse had risen to 100. The medicine was administered every three hours during the night. Immediately after each dose the pulse rose to 100, but in a short time fell to 92.

January 11th.—There was further improvement this morning. The muscles of the abdomen and legs were quite soft and flaccid, and those of the thighs becoming gradually relaxed. There had been no return of the spasms from 12 o'clock the preceding night. The sweating still continued, and exhaled the peculiar snuffy odour characteristic of the nicotine. The power of moving his limbs was increasing. As he complained of being tired of the beef-tea, it was ordered to be omitted, three eggs daily to be substituted for it; and stirabout, for which he expressed a desire, was ordered. His brandy was discontinued, and the nicotine ordered to be given in plain water. The next dose, the ninth of the increased quantity, was given at half-past four; and at half-past seven it was repeated, his pulse being 98. Up to that time there had been no return of the spasms. His bowels not having been moved for some days, a laxative enema was ordered.

January 12th.—He was not so well this morning. The sweating had ceased, and his pulse was 120. He had had only one or two spasms, and they were not severe, but he appeared nervous and anxious. The angles of his mouth were drawn slightly backwards, giving his face a peculiar expression. The fact of the cessation of the sweating being coincident with the discontinuance of the stimulants, suggested the idea that the nicotine required to be combined with these, in order to exert its full constitutional effects. The brandy was therefore again ordered, and the nicotine to be given in sherry in the following proportions:—Twelve drops were mixed with two ounces of wine, of which one drachm was to be taken every three hours; the dose being, therefore, thirteen-sixteenths, or, in round numbers, three-quarters of a drop. At half-past six in the evening, the medicine having been regularly administered with the stimulants, he was again improving; his pulse down to 96, and his skin moist and soft.

January 13th (Sunday).—His pulse was 100, but he was in every other respect still improving.

January 14th.—He felt himself much better, was able to move his legs and bend his knees to some extent. In the evening the muscles of his thighs and abdomen became a little more tense than they had been for some days, but he did not complain of pain. His pulse during the day ranged from 92 to 108, and at half-past seven it was 102. He was then quiet, and inclined to sleep. The dose of nicotine to be reduced one-half.

January 15th.—His face had regained its ordinary expression, and he could move his limbs more, but he did not like to do so, as it gave him some pain, and appeared to require great exertion. His pulse varied from 88 to 100.

January 19th.—He was able to sit up in bed. He got one dose of nicotine, and then the medicine was discontinued.

January 20th.—He was allowed to get up for the first time. He expressed himself as feeling very well; was able to stand without assistance, and could walk a step or two by holding on to the rail of his bed. A glass and a half of brandy to be taken during the day.

January 23rd.—No perceptible change; but he said he was getting gradually better. He had not been attacked by the spasms for several days, but still the muscles of his thighs were by no means completely relaxed, the adductors and hamstrings particularly.

January 24th.—Two strap-shaped blisters were ordered to be applied, one on either side of the lumbar spines; and he was desired to take five grains of iodide of potassium in a wine-glassful of compound decoction of sarsaparilla, three times a day.

He was discharged from hospital on the 6th of February, and the only inconvenience which he complained of was the stiffness in his knees, which was then rapidly diminishing. In all other respects he declared himself perfectly recovered.

The quantity of nicotine given to Kershaw, from the 8th to the 19th January (11 days), amounted to 44 drops, or 26·4 grs.

The following statements as to the physiological effect of this alkaloid, when combined with minute doses of alcohol, appear to be borne out by the details of the case:—

1. It produced immediate relaxation of the muscles of the abdomen, back, and diaphragm.
2. It caused cessation of delirium.
3. There was a slight tendency to cause increased circulation, to the extent of ten beats per minute.
4. It caused profuse sweating, which exhaled an intolerable odour of snuff, not of tobacco.
5. It had a tendency to produce deep sleep.
6. It failed to control quickly the adductor muscles supplied by the obturator nerve; and even when the hamstring muscles gave way, the adductors refused.

ART. 42.—*Traumatic Tetanus treated by Chloride of Barium.*

By Dr. GNECCHI, of Milan.

(*Edinburgh Medical Journal*, April, 1862.)

CASE.—A hairdresser, 39 years of age, cut himself in the palm of the left hand, about the beginning of March, 1858. The wound healed in six days, and there was no bad consequence until the morning of the 30th of March, when, on getting out of bed, he began to feel a difficulty in opening the mouth, a contraction of the left hand with impossibility of extending it, with pain in the right flank and thigh. For the first few days these symptoms disappeared when the patient lay down in bed, but returned when he got up and exposed himself to the air. On the 18th of April, as the symptoms were increasing in severity, the patient was admitted into the principal hospital of Milan. Next morning there was spasmodic contraction of the masseters, with rigidity of the muscles of the neck; the left hand contracted as soon as the arm was removed from below the clothes, while the pain in the flank and thigh persisted. The pulse was but little increased in frequency. Chloride of barium was prescribed in the form of sixteen grains of the salt in a pound of distilled water, to be taken in the course of the twenty-four hours. This dose was continued till the 31st, when, as the tetanic symptoms had almost disappeared, it was reduced to eight grains. The medicine was discontinued after the 26th April, and on the 28th the patient was dismissed cured.

In connexion with this case, it may be stated that Dr. Gneccchi has since succeeded several times in curing traumatic tetanus with this preparation of barium, that Dr. Gherini failed, but that Dr. Tassani succeeded in the case of a man wounded in the Italian war.

ART. 43.—*On a Proposed Remedy (a Species of Galium) for Epilepsy and other Spasmodic Affections.*

By Dr. OGLE, Assistant-Physician to St. George's Hospital.

(*Lancet*, May 10 and 17, 1862.)

This remedy is the one used at an establishment for epileptics at Tain in France; it is one, too, which, as Dr. Ogle shows, has an

ancient anti-spasmodic reputation. It is the galium album or mollugo, a genus of the madder tribe, well known in England as lady's bed-straw, or as maiden-hair or wild rosemary. Dr. Ogle has been at the trouble to pay two visits to Tain, and his present object is to give an account of these visits, and of certain trials which he made on his own account, with preparations made in England or received from France. He says:—

“Upon inquiry, in Paris, of several medical men and pharmaciens, I could learn nothing of the method of treatment, nor of the galium, excepting that in days gone by it had been used in France as an anti-spasmodic. I therefore determined to pay a visit to Tournon for the purpose of satisfying myself regarding the remedy alluded to, and accordingly journeyed onwards to this place, which happens to be a small but ancient town in the Département de l'Ardèche, directly eastward from the Puy de Drôme district on the map, about eleven English miles north of Valence, and about fifty-four miles south of Lyons on the banks of the Rhone, which here divides the Département de l'Ardèche from that of Drôme. The railway station at which I descended is Tain, on the eastern or Drôme side of the river, and at Tain resides M. Larnage, a gentleman to whom I carried an introduction, and in whose family I found that the charitable administration of the galium in cases of epilepsy has been hereditary. M. Larnage is one of the numerous and wealthy proprietors of the valuable vineyards on the southern slopes and terraces of the Hermitage Mountain, so renowned for the quality of its wine, upon which mountain also grows very abundantly the species of galium used as an anti-epileptic. On calling upon M. Larnage I was disappointed to find that he was at Paris, but in his absence was most courteously received by Dr. Pialla, a resident physician at Tain, from whom I obtained a chief part of the information of which I was in search.

“It seems that the remedy in question, as before said, has long been given by members of the Larnage family in cases of convulsive affections, especially in epilepsy; and that patients have for years been in the habit of flocking to the neighbourhood of Tain and Tournon from all parts of France, and also from other parts of the Continent, in order to procure the remedy; so that M. Larnage, without being a medical man, has had large experience in certain forms of these diseases. According to Dr. Pialla, the remedy had also lately been used by Dr. Miergues at a place called Anduze, a town on the river Gardon, much more south of Tain and to the north-east of Nismes. No less than between 800 and 900 patients come yearly to Tain to obtain the remedy, which is nothing more nor less than the expressed juice of the galium obtained in the months of May and September, when the plant flowers. Of course the indiscriminate treatment by one remedy of so large a number of patients affected by convulsive diseases, thronging together as they all do at one exact period (*viz.*, at the first full moon in the above-named months), apparently without classification as to the diverse *characters* of their maladies or their exact *causes*, is far from being precise or scientific enough; and if the mode of treatment *be* potent

in any direction, it must, used thus indiscriminately, in some cases at any rate, be otherwise than beneficial. Yet experience has, it would appear, led to a specific mode of administering the remedy, and to an accompanying regimen which is considered necessary, and from which it is quite possible that much of the accruing benefit results. Thus it is rigidly laid down that the diet should be light (*très doux*). All wine, coffee, beer, liqueurs, and dark-coloured and cured meats are to be avoided; and veal, fowl, eggs, fish, vegetables,* milk, and fruits of good quality, only to be used. Hot foot-baths, and large baths at a moderate temperature in fine weather, are to be resorted to. Cold feet, and also fatigue and excessive emotion, are to be avoided.

Such is the general regimen to be adopted by so-called epileptics. On their arrival at Tain to take the juice of the galium, adults must entirely fast both from eating and drinking for the period of twenty hours, and children for the period of twelve hours; and on the following morning about four or five ounces of the juice of the plant are given. This is to be succeeded by a light meal, and then a return is allowed to the ordinary diet above described. In some cases the fasting and the dose of the expressed juice are repeated, though this is rare. But in order to continue the good effects of the remedy, the simple juice of which cannot be carried away, certain tablettes or pâtes, containing the fresh juice evaporated and mixed with gum and sugar, are made and given to the patients for their use at home, with the following rules:—Every two days, early in the morning before taking food, the patient is to take one of the tablettes; and each succeeding week he is to take one more per diem until they produce a slight purgation. After this he is to discontinue their use for eight days, and then to recommence them in the same way. In no case ought more than eight of the tablettes to be taken in one day. A quarter of an hour after taking each tablette a cup of veal broth is to be drunk. On the days when the galium tablette is not taken, an infusion of the wild valerian root, or of orange leaves, is to be taken in the morning on an empty stomach. In the case of young children, the tablettes may be dissolved in water.

“Such is the general mode of treatment adopted in cases of epilepsy, and, as far as I could learn, in all cases of convulsive attacks which resort to this place for treatment. Dr. Pialla stated to me that he had seen more than 4000 epileptics treated by the galium, and that at least 3000 had been cured. His words are: ‘J’ai vu plus de quatre mille epileptiques traités par le galium, et je ne crains pas d’affirmer que trois mille au moins ont été guéris ou soulagés.’ He observed that the majority of those who resort to Tain to take the juice persevere in the use of the tablettes or pastiles, which they carry back with them. Whether all these cases are veritable epileptic ones or not would appear to be somewhat doubtful. * * *

“But I was not only to hear of the treatment adopted in the case of such as come from afar twice in the year, but also to see it carried

* I subsequently learned that asparagus is considered to predispose to the epileptic attacks.

out in the case of a number of epileptics collected together in a kind of hospital in the village of Teppe, about two miles distant from Tain, under the medical care of Dr. Pialla, and with all the advantages of rigid dietary, quietude, and regularity of life and mind, and every kind of hygienic care. This institution, which goes by the name of the 'Asile de St. Vincent de Paul pour les Epileptiques,' was founded in August, 1857, by M. Larnage, under the auspices of the Council of the Department, and by him was consigned entirely to the charge of the sisters of the Congregation of St. Vincent de Paul, for the reception of those for whom, as a class, no other hospital opens its doors. It was established chiefly to succour the indigent victims of this disease; and for this purpose four classes of inmates are taken in at different rates of payment, and out of the income thus accruing from the richer patients gratuitous places are created for the poor, which are placed at the disposal of all the Departments according to the amount of assistance afforded by them to the work. The material arrangements and religious consolations of the patients are afforded by the 'sisters' of the order; and one could not fail to notice the scrupulous neatness, cleanness, and extreme comfort which prevailed in the institution, and the obviously great care and attention given by the sisters and other attendants to the wants, as well secular as religious, of the inmates, under the surveillance of the superior. At my first visit there were between 80 and 100 invalid residents in the Asile, but applications for admission had been so numerous that it was proposed to afford very considerably increased accommodation. * * * *

"So much for the Asile itself. I had the opportunity of meeting M. Larnage in Paris on my return, who confirmed the particulars which I had learned at Tain, and who showed an intimate knowledge of what was known and written generally of epilepsy. I naturally expressed myself as being anxious to try the effect of the galium in England, and for this purpose he kindly proffered to supply me gratuitously with a sufficient number of the pâtes as a substitute for the fresh juice, which of course I could not transport with me. I was also curious as regards the construction of these tablettes, and spoke of my intention both of procuring the fresh juice and of making the tablettes in England; but I was promptly reminded that such attempts had always been and would ever prove useless, as the species of galium used, though growing abundantly in France, and no doubt in many other parts, was entirely wanting in those specific anti-epileptic qualities by which that grown on the famed Hermitage Mountain was distinguished. Nay, further, that just as it was only on one part of the Hermitage Mountain (owing to peculiarity of soil) that the grape yielded the juice for the best kind of wine, outside the limits of which the wine produced was very inferior, so it was only one part of this hill that afforded the galium which possessed the true anti-epileptic properties. The exactness of this statement, though somewhat sceptical, I could not gainsay, knowing how much of the virtues and peculiarities of plants are known to depend on climate, soil, mode of cultivation, &c. Nevertheless, as one in the position of M. Larnage might very

naturally hold such a view from prejudice, and as it was quite clear to me that he was at the same time very unwilling to make me acquainted with the method of obtaining the fresh juice, and was particularly reticent as to the mode of constructing the lozenges, and as at the same time I was aware that the plant grown in other parts and at other times was supposed to have been highly serviceable, I was determined on my return to England to procure a quantity of the galium plant, and obtain the juice. I asked M. Larnage if it would not be advisable to have a tincture or an extract made from the plant; but he did not seem to think it would be possible. * * * * *

"With the view of trying the effect of it in England, I had sent over to me by the kindness of M. Larnage a number of boxes of the galium lozenges, and also procured an additional number which remained unused from the friends of the English patient whose case I mentioned previously. Moreover, I enlisted the assistance of Messrs. Bullock and Reynolds, chemists, of Hanover-street, who were good enough to procure a quantity of the fresh galium grown in Lincolnshire, as well as a quantity grown in the neighbourhood of Paris, and to prepare for me an extract of the recent juice and also a liquor. These preparations are made from the expressed juice of the plant, gathered whilst in flower, to which a very small quantity of water has been added, mixed with fifteen per cent. of rectified spirit, for the purpose of preserving the solution. I am also having a syrup made according to the injunction of Miergues, as above alluded to, for the use of children.

"With these supplies—viz., the lozenges made at Tain and the London-made extract and liquor—I have treated several cases of epilepsy, as well private as hospital patients, and also some cases not of epileptic character, but requiring what we are wont to call anti-spasmodics. With my hospital patients at least I was, of course, unable to lay down with anything like success such strict rules and quietude of life as are desirable. I was obliged to be content with giving the preparations on an empty stomach three times a day, as much as possible refraining from giving other medical agents contemporaneously. In some cases—and they formed a large number—though not in all, obvious debility necessitated the conjunction of tonics; in others, subsequent to the use of tonics, anti-spasmodics, &c., I relied upon the galium singly administered.

"I will not, in a communication of so general a nature as this, venture to offer anything like details of the cases in which I have given the remedy. They have been cases indiscriminately taken amongst patients of every age, and of both sexes, &c.; but in all cases, save one, I had reason for supposing that the cases were of inorganic origin. The result so far has been, on the whole, more favourable for the remedy than for any other that I have tried *in the same period of time*, whether the number of the seizures on the one hand, or their strength and complication on the other, be considered. In one long-standing and severe case, a young man of about twenty-three years of age, by his own acknowledgment, the

attacks were certainly kept, for above a year, at a minimum both in frequency and intensity, under its steady and continuous use, the change for the better occurring very shortly after the use of the remedy was begun.

"I can only regret that I have been unable to give the remedy hitherto so fair a chance, so to say, as it ought to have, in the matter of attendant care, hygiene, &c.; for it is only under such more advantageous circumstances that either its curative properties could be fully shown, or the nature of its action properly investigated. I may here remark, that I have found as much benefit from the London-made preparations as from those brought from Tain. What may be the exact *modus operandi* of the galium I am far from being able to state. That it is not inactive I am sure. I have certainly, in some cases, found it provoke extensive vomiting and purging, and other very unpleasant consequences; and it will be remembered that in the recommendations above quoted as being given at Tain regarding the use of the tablettes, they are to be persevered with until a slight purgation is produced. It will be also borne in mind that Dr. Miergues considered its action to be most certain when it acted as an 'evacuate.' * * *

"Such, then, is the sum of the information which I am in the position to offer regarding the Asile at Tain, and what may be called the galium treatment there afforded. I will not now be so bold as to give any definite opinion regarding the claims of the treatment upon the attention of the profession. Whether the supposed anti-epileptic virtues of the galium are due to eliminative or to sedative properties—or whether, indeed, the method of treatment adopted derives any considerable measure of its success from the galium, or is only valuable by reason of the hygienic accompaniments, the attention to diet, the well-ordered life in reference to exercise, sleep, mental emotions, &c., regulation of the secretions, &c., which are very strictly enforced—I will not take upon myself to determine. I am well aware of the valuable effects of these hygienic and common-sense precautions in the treatment of epilepsy, *whatever strictly therapeutic line is followed out* (advantages which, however, the crowds who flock to Tain yearly can hardly be supposed to possess to any extent); and I also know what effect, of a longer or shorter duration, the use of anything like a *new remedy* has upon many patients. Yet, with all these considerations, I have felt that the manner in which the galium treatment has been from time to time for many years spoken of, and the use of it in my own hands, afforded ample reason for its being well considered and brought prominently forward, in order that, by abundant and simultaneous trials in diverse cases and under various circumstances, its expected properties—the *rationale* of its action—may be thoroughly tested."

ART. 44.—*Hiccough of Fifteen Days' Duration cured by Valerianate of Zinc.*

By Dr. DANET.

(*Gazette Hebdomadaire*, October 10.)

CASE.—The patient had experienced great mental annoyance, and was suddenly seized with vomiting and intense headache. A few hours later, as the symptoms continued, and there was now occasional hiccough, M. Danet prescribed an emetic-cathartic, which produced a great number of evacuations; and the hiccough now became incessant. This was soon accompanied with spasmodic movements, cries, faintings, &c.; also the pulse became intermittent, and at last fell to 34 in the minute; strangely enough, too, the beats corresponded with the hiccoughs. A great number of anti-spasmodics were vainly employed. At length, on the 12th day of the illness, M. Danet prescribed $\frac{1}{4}$ grain of valerianate of zinc, with a very small quantity of extract of belladonna, in a pill. The hiccough soon ceased, the pill was repeated a second and a third time, at intervals of a few hours; but the distressing malady never recurred, and the patient quickly recovered. It is important to notice what serious looking symptoms in the circulatory system were produced by a simple neurosis, and cured by the appropriate remedy for the latter.

ART. 45.—*Intense Neuralgia relieved by Tincture of Aconite.*

By Dr. HABERSHON, Senior Assistant-Physician to
Guy's Hospital, &c.

(*Medical Circular*, April 30, 1862.)

CASE.—James G., aged fifty-eight, a carpenter, from Rotherhithe, was admitted under my care into Guy's Hospital, October 24th, 1860. He was a married man of temperate habits, and, till the commencement of the present illness, he had enjoyed good health, with the exception of an attack of typhus fever twenty years previously.

The first indication of the complaint which had entailed such intense suffering dated six or seven years before admission. He had fallen asleep after dinner, and, when he awoke, the left side of the face was paralysed, and he was unable to speak. He, however, went to his work, but was compelled to return in one hour in consequence of giddiness. These symptoms slowly passed off, he recovered the muscular power in his face, and his ability to speak; still, there were occasional attacks of vertigo. About five months after this slight facial paralysis, whilst washing, he felt sudden darting pain in his face; in two or three months a second attack came on in a similar manner. They then increased in frequency, and the pain was brought on by speaking and by eating, so that at length agonizing suffering every five or ten minutes came on, rendering him unfit for work, and making his life most miserable.

The pain always commenced in the upper lip, or, rather, in the position of the infra-orbital foramen, and radiated over the face—1st, in the course of the branches of the second division, afterwards along the remaining branches of the fifth nerve; and on admission into Guy's, the most trifling cause sufficed to bring on the paroxysms of pain, such as gently touching the face or speaking, &c.

He had an anxious and distressed countenance; the lower eyelid of the

left eye was partially everted; the temporal muscles on the same side slightly wasted, and the muscles somewhat flaccid and emaciated, and the seventh nerve was rather weaker on the left than on the right side. There was marked arcus senilis, the pupils were rather small, especially the left, which was also sluggish under the influence of light; the sight was diminished in power, but he had not suffered from double vision, nor from sparks before the eyes. The hearing was equal on both sides. During his illness he had lost muscular power generally, and had become emaciated, but there were no hemiplegic symptoms, and his mind was unaffected. His appetite was good, but he was unable to take solid food; the bowels were regular. For several winters he had been troubled with cough, and rhonchus was audible in the chest. The tongue was clean, and was protruded straight; all the teeth on the left side of the upper jaw had been removed, and the gums were healthy. The abdomen was supple; a reducible hernia existed; the pulse was compressible; the sleep was disturbed by the almost constant paroxysms of pain. No local or peripheral cause of this neuralgia could be found, and the solution of arsenite of potash was first tried; chloroform was given at night, afterwards opium and morphia; quinine was tried, and the hydrochlorate of ammonia, and preparations of steel. A combination of morphia, belladonna, and henbane had no better effect; and on the recommendation of one of my colleagues, a small blister was applied over the infra-orbital foramen, and the subiodide of mercury sprinkled upon the surface; this was alike unavailing. The patient informed me that the endermic method of applying morphia had been tried without success. The division of the second division of the fifth, as it left the foramen, was discussed, but the probability of relief was so slight, that we did not feel warranted in urging it upon the patient. Aconite had been applied externally *without* relief, and I now determined to use it internally, and gave m ij . (P.L.) three times a day. In three days there was manifest relief from the pain; the paroxysms became less frequent, and the patient had a little sleep at night; the dose was slowly increased, till xii m three times a day were attained. The paroxysms of pain now ceased to a very great extent, only recurring about five or six times a day. He was able to sleep, and to take food better, the eversion of the eyelid became less marked, and his whole aspect was more cheerful. After continuing this dose for some days, the legs became weakened, and a peculiar sensation was produced in the mouth; it was, therefore, necessary to diminish and then to discontinue the aconite. Steel was given instead, but in a short time the paroxysms of pain returned with their first intensity. The aconite was again resorted to, and with the same effect as before. Aconite had been used in this patient, I afterwards found, with like good effect in St. George's Hospital. This patient was retained in the hospital for several months, and left greatly relieved.

The general symptoms produced by aconite are those of a powerful sedative. The spinal are more affected than the cerebral nerves; but, perhaps, more than either is the extensive system of vasomotor nerves—the sympathetic. We believe that it was by its sedative action that it afforded relief in the case of intense neuralgia that we have just detailed; and we regard it as a remedy that, with due care, might be very advantageously employed in many diseases of cerebral as well as of thoracic origin.

ART. 46.—*The Diagnosis of Partial Palsies of Sensation, especially of Paralysis of Touch.*

By Dr. EIGENBRODT.

(*Virchow's Archiv*, xxiii. 5, 6; *Schmidt's Jahrbücher*, 9, 1862.)

Dr. Eigenbrodt has made some careful observations on the different degrees in which the various kinds of skin sensation are affected in cases of paralysis. He employs the method of water, giving preference, however, to the test *by pressure* rather than to the use of the compass-points. In applying this test he is careful that the medium between the applied weight and the skin shall be of the same temperature in each experiment. In one case the interesting observation was made, that whereas, on the application of the pressure test to the palsied arm *when it was supported*, no distinction could be made by the patient between five pounds weight and nothing, in its application to the same arm *unsupported*, so slight a difference as that between fifteen and sixteen ounces was easily perceived: a fact which the author considers strongly to support the theory of a special muscular sense. He has never seen a case in which the *sense of pain* was destroyed while the power of *touch* remained intact.

Dr. Eigenbrodt has applied the term "Apselaphesis" to cases of special palsy of the sense of touch, or of the sense of pressure, in preference to the indefinite phrase "partial palsy of sensation," already applied by Puchett and others.

ART. 47.—*On Paraplegia.*

By Dr. T. GAILLARD THOMAS, Physician to the Bellevue Hospital, New York.

(*American Medical Monthly Journal*, June, 1862.)

Dr. Thomas prefers the term "functional paraplegia" for those forms of paraplegia not attended with organic changes, to the term "reflex paraplegia," introduced by Dr. Brown-Séquard. He gives the following table of symptoms diagnostic between organic and functional paraplegia:—

Organic Paraplegia.

1. Comes on suddenly, and is more or less complete.
2. There is pain in back, extending down the legs and around the body.
3. Passing ice or hot water down spine gives great pain.
4. Jerking or spasm of muscles of legs exists.
5. Bladder and rectum are affected.

Functional Paraplegia.

1. Comes on gradually, and is always partial.
2. No fixed pain in back or legs, and no "band" around body.
3. None is experienced.
4. None.
5. Not so.

*Organic Paraplegia.**Functional Paraplegia.*

6. Prickling and formication occur.

6. None.

7. As time passes, the paralysis becomes worse.

7. As time passes it diminishes.

8. There is great tendency to bed-sores.

8. None whatever.

9. Extremities are colder than normal.

9. Temperature normal.

10. Sensibility impaired.

10. Not so to any great degree.

11. Muscular enfeeblement is strictly confined to the lower limbs.

11. There is often a tendency to enfeeblement of upper limbs.

"In speaking of the treatment of organic paraplegia, I told you that the indication is to disgorge as much as possible the vessels of the cord, and produce a sedative, quieting effect upon it. In the functional variety the reverse is true; we should endeavour to stimulate the functions and circulation of the cord.

"To this end, no drug compares for an instant in value with strychnia, and I shall prescribe that here, to be given until a decided constitutional effect is produced. At the same time I shall direct the use of cold shower baths along the spine, and the frequent application of electricity. The patient must be encouraged to exercise the muscles systematically and steadily, and she will receive the best diet which the institution affords. My experience with these cases leads me to hope and believe that under this course she will rapidly recover."

Several interesting cases of functional paraplegia are recited, of which we extract the following:—

CASE.—Mary Lewis, born in Ohio, æt. 23, married, admitted to the hospital on the 14th of April. The patient enjoyed perfectly good health until about six weeks ago, when she was attacked by acute dysentery, which was accompanied by constant nausea and vomiting. After this had lasted for a week, she noticed a prickling sensation in the legs, and found herself growing gradually feeble in these members. In about three weeks from this time she became almost entirely paraplegic, so as not to be able to walk without great assistance; as I now direct her to stand, you observe that she sways to and fro, and every now and then seems about to fall, which she would do, if not prevented by firm support. Her left arm has likewise become somewhat, though not a great deal, enfeebled. Besides the symptoms mentioned, she has none pointing towards the spinal cord; there is no trouble about the bladder or rectum, and only for a week has pain in the back been complained of. The dysentery still continues, although not with its former violence.

This case I regard, gentlemen, as a good type of the reflex paralysis of Séquard. What the absolute connexion is between the ulcerations in the large intestines (or, at least, the inflammation there,) and the enfeeblement of the muscular system, I am not prepared to say, for I am free to confess a great degree of scepticism as to the hypotheses of Brown-Séquard on the subject; still, in the present state of pathology, I know of no better way of dealing with this variety of functional paraplegia than by classing it with the reflex variety of that eminent investigator.

The treatment which I shall adopt in this case will be entirely directed to the dysenteric trouble. If, as I suppose, the other is secondary to this, it may pass off without treatment; should it not do so, it shall engage our attention at a future period.

May 14th.—I show you again the patient Mary Lewis. She has now entirely recovered from the dysentery, and the paraplegia has so far passed off that she can stand and walk across the floor without assistance. When in the presence of Drs. Flint and Clark she was this morning demonstrating her ability to walk, I requested her to shut her eyes, and she suddenly and violently fell to the floor. She can stand without difficulty with her eyes open, but the instant that she shuts them she falls as if shot through the head. This curious pathological phenomenon I have noticed in a number of cases of functional paraplegia; so commonly, indeed, that I am now inquiring, by clinical investigation, whether it be not diagnostic of this variety, at least to a limited degree.

Some time ago, a male patient suffering from phthisis and empyema in this hospital was affected by paraplegia, which was regarded by the physicians of the service in which he was as organic. One day, Dr. Echeverria, in going through the wards, directed him to stand erect (which he could readily do) and close his eyes, when instantly he fell to the floor, as you have seen Mary Lewis do. This being repeated, the same result instantly took place.

The patient died, and a careful autopsy revealed the cord in a perfectly healthy condition; the case having been one, I think, of functional paralysis, perhaps dependent upon irritation reflected from the diseased pulmonary or pleural surfaces; in other words, a case of reflex paraplegia.

ART. 48.—*Abscess of the Corpus Rhomboideum of the Cerebellum, with Muscular Rigidity.*

By Dr. POPHAM.

(*Dublin Quarterly Journal of Medical Science*, August, 1862.)

At one of the recent meetings of the Cork Medical and Surgical Society, Dr. Popham presented a specimen of abscess of the cerebellum involving the rhomboid body, which was taken from a woman named Brodie, aged 70, who died, February 4th, in the Cork Workhouse. She had been a lunatic for a number of years; but about eight months before her death she became violent, and had to be transferred to the asylum, from whence she was returned, last November, to the workhouse as incurable. When readmitted she was totally helpless. Both the lower extremities were rigid and extended, the sensation in them being much impaired; the left hand was powerless; several ulcers of a scrofulous character existed on the neck, between the shoulders, and in the right axilla; the bowels were always confined, the urine was passed involuntarily; she had considerable fever; her pulse was excited, and skin hot; and she was constantly engaged in directing attention to her forehead as the seat of pain, and striking it; while in the asylum, she refused at first, for several weeks, to go to bed; and from the period of her return to the workhouse till her death, she slept very little, babbling and shouting unceasingly, both night and day. When she was asked a question, she answered with tolerable correct-

ness a few words, but quickly relapsed into incoherency—the association of her ideas being very defective. Like many lunatics, however, she had a few constant topics—such as her former place of residence, and the imaginary escape of her money through her elbow—a circumstance usually better understood in the figurative than the literal sense. She never had epileptic fits. Her death was easy, and without coma.

On examination after death, the brain was firm and hard, and its bulk so small that Dr. Popham was curious to have it weighed—which was done in his presence by Dr. Gardiner. It weighed exactly 36 ounces. The internal structure of the cerebrum, more especially the medullary part, was found to be of more than ordinary consistence. The cerebellum seemed very vascular; on cutting it, the rhomboid body was found softened, and purulent matter was plainly perceptible.

In commenting upon the case, Dr. Popham pointed out some symptoms which seemed to have more than a casual connexion with the necroscopic appearances. Among these was the constant *wakefulness*. Should we attribute, he asked, the want of sleep to the structural lesion? Has the cerebellum any agency in maintaining, vicariously, the involuntary actions of the system during the sleep of the brain proper? If so, lesions interrupting its operative functions ought to react upon the cerebrum, and disturb the natural succession from action to rest.

Again, another symptom was the *rigidity* of the muscular system. Spasmodic extension seems to occur in this disease rather than paralysis. In the present case it appeared to have been the sequel of previous restlessness and excitement. Now, physiological experiments have proved the wonderful influence of the cerebellum in coördinating the actions of the muscles, by showing the vagueness of purpose with which the muscular movements are carried on when this organ is removed. Dr. Popham mentioned an interesting example, bearing some resemblance to the above, in the nineteenth case cited by Dr. Bright in the second volume of his "*Clinical Reports on Diseases of the Brain*." In that case there was also an unhealthy state of the rhomboid body. It occurred in a child who died of hydrocephalus, and in whom there was a similar degradation of the part above-mentioned, and a similar diminution of size in the brain, with increased firmness in the medullary part, so that the knife almost gave the sensation of cutting through soft cartilage. In Bright's case the chief symptoms were rigid and extended limbs, great restlessness, constipated bowels, and imbecility of mind. Dr. Bright further noticed that corresponding effects were produced in another case, where the cerebellum was not diseased, but unduly compressed. Dr. Popham also remarked, that in a case of acute abscess of the cerebellum, recorded by Dr. Gordon in the fifteenth volume of the *Dublin Quarterly Journal of Medicine*, muscular rigidity was a prominent symptom.

ART. 49.—*Peculiar Gelatinous Degeneration of the Cerebellar Membranes, &c.*

By DR. BILLROTH.

(*Schmidt's Jahrbücher*, No. 5, 1862.)

CASE.—A man, aged 39, had symptoms of paralysis of the insane, but without palsy of the tongue, extremities, or sphincters. He became increasingly emaciated, and died; for the last six months of his life he had suffered from a boil on the lip, which had become affected with erysipelatous inflammation. On post-mortem examination, the brain was found healthy. The cortical substance of the cerebellum exhibited a marked change; the pia mater was everywhere adherent, the grey substance distinctly gelatinous and homogeneous, following closely the convolutions and lobes of the cerebellum. Microscopic examination exhibited the whole of the capillary vessels in this jelly-like mass covered with a thick membrana adventitia, from which sprang knotty twisted excrescences. The jelly-like mass, to all appearance, had been generated originally from the membrana adventitia. The capillaries in the apparently sound parts beneath were found to be in an extreme state of fatty degeneration.

M. Billroth reviews the diseases of the vessels of the brain; he considers that fatty degeneration of these, which is so common an affection, is not primary, but results from deposition of fat molecules in the adventitia, which are the product of altered nutrition in the nervous substance itself. With regard to the *productive* processes, these affect chiefly the small arteries and veins, and the adventitia, which is so rich in cells and nuclei. The cells multiply and suffer various changes. In simple new formations they merely multiply, or there is developed from them an intercellular connective tissue, which if it be fibrous merely thickens the adventitia, but if it be mucous and hyaline surrounds it with a tissue of that nature, as in the case narrated. In many cases a partial atrophy of the circular muscle-fibres of the vessels takes place, and small aneurisms are formed. When the multiplication of cells is very circumscribed, true tubercle is the result. Finally, tissues of a higher order, such as sarcoma and carcinoma, may spring from the multiplication of the cells of the adventitia; indeed, in all probability, all brain humours are formed in this way.

ART. 50.—*On Diseases of the Cerebellum.*

By DR. GEORGE SHEARER.

(*Edinburgh Medical Journal*, July, 1862.)

Dr. Shearer relates the particulars of three cases of cerebellar disease, and gives short summaries of three other cases. After this he proceeds to an enumeration of the symptoms presented in cerebellar disease in the order of their importance. Of these the three first take the position of *leading symptoms*, and a concurrence of the first five might (in Dr. Shearer's opinion) lead to a certain inference as to the presence of disease in the cerebellum.

"1. The general integrity and clearness of the intellectual functions or their comparatively slight obscuration. In Abercromby's and Cruveilhier's cases, such statements as 'intelligence perfect,'

'intelligence preserved,' 'intelligence perfect up to the last moment,' are of constant occurrence.

"2. Impairment of the co-ordinating, balancing, or regulating power necessary to combined action of the muscles. The individual becomes 'top-heavy,' turns round awkwardly, and frequently staggers or falls; in short, he presents the peculiar gait of a drunken man.

"3. The periodic utterance of sudden, involuntary, automatic cries or screams, resembling those of the lower animals when the cerebellum or its peduncles is subjected to vivisection.

"4. The pupils are invariably *dilated*, contrasting remarkably with their contracted state in diseases of the pons. (Dr. W. T. Gairdner and Herman von Weber in *Med.-Chir. Trans.*, vol. xlv.)

"5. The pain in disease of the cerebellum is felt either in the forehead, temples, or vertex, or it is general. It is rarely located to a spot in the occiput.

"6. Deafness, whether partial or complete, appears invariably to depend upon involvement of one or both auditory nerves in the morbid growth. It is by no means a constant symptom.

"7. The occurrence of convulsion fits and the symptoms of nausea and vomiting do not appear to be more frequently met with in cerebellar than in cerebral diseases.

"8. The cutaneous sensibility of the general surface does not appear to have been either exalted or impaired in any of these cases.

"9. Amaurosis and squinting are more frequently absent than present, and when met with depend upon specific disease affecting the nerves concerned.

"10. These cases afford entirely negative evidence in regard to the supposed influence of the cerebellum over the sexual system as advanced by Dr. Gall."

ART. 51.—*On the Treatment of Chronic Hydrocephalus by Iodide of Potassium.*

By Dr. JAMES LISTER, Belleville, C.W.

(*British American Journal*, May, 1862.)

"Since I first began the employment of the remedy," says Dr. Lister, "I have met with and treated fifteen cases of the disease. (No deaths have occurred from the disease itself.) One of the patients died of typhus fever at eleven years of age, and the other, a considerable time after the treatment of her case by me, of whooping-cough. I think this will compare favourably with any method of treatment recommended by authors.

"I shall now adduce four cases of the disease in evidence, selected as being more marked in my memory, and as having occurred within the last ten years. In 1855, in the spring of the year, I was requested to visit I. G., aged ten months; the father was a man of extremely irregular habits, and the mother's disposition was irritable to a degree. The disease had made its appearance at the date of teething, and had advanced to a very considerable length when placed under my care. The frontal suture was open, fonta-

nelles remarkably tense and enlarged, the forehead projected over the eyebrows. The mental faculties were very dull; the child remained in a languid, listless state, and at times great irritability was manifested; the digestive functions appeared to be feebly performed, and the lower extremities remarkably undeveloped; great emaciation of the body and pallor of the face were conspicuous. The disease was advancing rapidly on my first seeing it, and the weight of the head made the child unwilling to raise it.

"The treatment was commenced at once by giving a mercurial purgative, and after the bowels had been well acted on, two scruples of the iodide of potassium to six ounces of water sweetened with syrup; of this mixture one teaspoonful was given every four hours during the day. The hair was cut very close, and tincture of iodine painted over the whole surface of the scalp once every day. It required great resolution to enforce this part of the treatment, as the child appeared to suffer from it. This treatment was strictly and resolutely adhered to for about a month, when the first positive signs of amendment began to appear. There was less of the lethargy and heaviness noticed, the legs became more developed, and the infant made successful attempts to move them. The change, however, was very gradual; after a time the appetite improved, the pallor gradually wore off, and the emaciation became less marked. The appearance of the head was remarkable, the size did not appear to diminish very much, but ossification began to take place in the fontanella and membrane between the sutures. The further progress of the disease was completely arrested, the face filled out, intelligence returned to the features, and in twelve months from the commencement of treatment, the child was perfectly well. Some little deformity yet remains from the disease having been allowed to proceed so far without treatment, the head is larger than in other children of her age, and the forehead more projecting. The child is now as well, active, and lively as other girls of her age, and her intelligence just as acute. It would be difficult to show a more clearly marked case of cure.

"The second case occurred in 1856. The child, a boy, was two years old when first seen. In this case the enlargement was not so well marked at the forehead and occiput as in the other; ossification had taken place, but the head was much larger than in other children of his age. Convulsions had set in, and marks of pressure, such as squinting, rolling of the eyes, even very evident loss of power in the legs, the child being unable to walk or even stand alone, and appeared uneasy unless it could find a rest for its head; face very much flushed, and eyes injected. The mother stated that the child suffered very much while teething, and had disturbed her rest so constantly that she gave large and continued doses of Godfrey's cordial to procure sleep. This pernicious practice had unquestionably a great share in inducing the disease. The mother appeared much distressed at the prospect of the child being a confirmed idiot, and readily promised to persevere in the treatment recommended, in spite of the advice of officious neighbours, which is the curse of country practice.

"Two smart purgative doses of calomel and scammony were given each week for about one month, or till the flushed and congested state of the face and head was removed; at the same time the iodide of potassium was given, and some time after the scalp was painted with tincture of iodine; in six months this child was perfectly restored, was able to run about, and is now a strong, robust boy.

"The third case occurred about five years since. L. S., a female infant, apparently healthy at birth, had an attack of jaundice. (It may be here remarked that several other infants of this family suffered from the same disease.) The father, a man of intemperate habits, and broken-down constitution, the mother, an American, of leucophlegmatic temperament. The scrofulous taint is strongly marked in all the children. At four months old enlargement of the head was noticed, and the case came under my care. The usual symptoms of the disease were present, the fontanelles open widely, frontal suture unclosed, great weight of the head, and very marked want of development of the lower extremities; convulsions occurred, and the child's eyes were persistently directed downwards, and constantly rolling from side to side; appetite not much impaired, but bowels much constipated. In this case calomel was largely used as a purgative, but in spite of its employment the disease advanced until the iodide of potassium was freely given. The favourable change that took place after its administration was very gradual but none the less marked; the child in about nine months recovered perfectly from the disease, and is now healthy and strong. Even at this date the head is large for the age of the child, but intelligence is perfect and the lower extremities are well developed, not differing from other children in this respect.

"The fourth case occurred last year. On the 10th July an infant was brought to me with every appearance of the disease. It lay moaning in its mother's lap, incessantly moving its head from side to side, and unwilling to be touched. The body was robust in this case, and apparently well nourished, but the enlargement of the head well marked; the parents had the scrofulous diathesis; the same loss of power over the lower extremities was noticed; age ten months. The eyes had a vacant, idiotic look, and squinting existed to some extent. The same treatment was enforced, and the child brought to the surgery at intervals of six weeks. The last time the mother was here, in March, the infant had regained the power over his lower extremities, was running about and playing, and the face had assumed the appearance of returning intelligence; ossification had taken place, and the fontanelles were closed. The case, though very much improved, is still under treatment, and I have no doubt will terminate, as those already given have done, in complete recovery.

"I am aware that the treatment I have been endeavouring to lay down has been occasionally practised, but I do not think it has been patiently carried on for many months, as in the cases given; and I think I may with perfect justice claim the merit of being the first to carry it out to great extent in Canada. Of its advantages

the cases given have spoken; by its use the effusion has disappeared, and strength has been imparted to the enfeebled body. As already stated, I have not met with an unsuccessful case. Compared with those destructive means of mercury, the application of leeches, and the hazardous *dernier resort*, tapping—I think it will stand out in relief as a rational mode of cure."

ART. 52.—*Clinical Researches upon Auscultation of the Head.*

By M. HENRI ROGER.

(*London Medical Review*, August 6, 1862.)

It is well known that the first application of the discovery of Laennec to the diagnosis of diseases of the brain was made by Dr. Fisher of Boston. In 1833, this physician communicated to a learned society a memoir upon the *cephalic bellows sound*, and transmitted his interesting researches to the *American Journal of Medical Science*, August, 1838. "Auscultation," said Dr. Fisher, "may be as useful in the syptomatology of affections of the brain as it is in those of the chest, and may furnish a pathognomonic sign of these diseases." After having traced the rules of cerebral auscultation, and indicated the normal sounds which reach the ear when applied to the head, and having distinguished those which come from the nasal fossæ, and which belong to respiration and phonation, as well as those which proceed from deglutition and from the head itself; after having distinguished all these from abnormal sounds, Dr. Fisher considers the *cephalic souffle* in the diseases of the encephalon. He mentions among other affections of which an abnormal bruit is one of the symptoms, *chronic hydrocephalus*, *cerebral congestion*, either simple or resulting from disordered dentition or whooping-cough, acute inflammation of the encephalon or its membranes, abscess of the brain and induration of that organ.

Dr. Whitney went even further than his colleague in his opinions with regard to the symptomatological value of the cephalic souffle (*American Journal of Medical Science*, 1843). To the affections mentioned by Dr. Fisher—cerebral congestion, meningitis, &c., in which the stethoscopic phenomena were present, he adds scirrhus transformation of the cerebellum, and mechanical compression of the brain. He says, moreover, that he perceived a cerebral ægophony in hydrocephalus, a bruit similar to the catarrhal fremitus in aneurism of the arteries at the base of the brain, and finally he points (and with reason, in certain cases) to the existence of a cephalic souffle in anæmia of the brain and also in chlorosis. Notwithstanding the labours of these two American authorities, each of whom confirmed the observations made by the other, and in spite of results which generally agree, and which seem to have the testimony of numbers—for the facts in their memoirs count by hundreds—cerebral auscultation, which promised to throw an unexpected light upon a very obscure point in pathology, met with but little favour. The European medical journals confined themselves to incomplete analyses

and short extracts: while but few practitioners thought it their duty to repeat the experiments necessary for a criticism of the facts which had been stated by our American brethren, as if they mistrusted a discovery coming from such a distance.

In the year 1841, in the first edition of the *Traité Pratique d'Auscultation*, mention was made of the observations of Drs. Fisher and Whitney; but the experiments to which M. Barth and I devoted ourselves for testing their truth, though certainly not very numerous, only gave us negative results. After having searched in vain to discover a cephalic souffle in certain cerebral affections, and having been unable, in twelve or fifteen cases of meningitis, to hear any such, while the American doctors declared it to be present in all—strengthened besides in our scepticism by the silence maintained by MM. Andral and Bouillaud upon auscultation of the head, and by the equally negative observations of MM. Fournet and Vernois, in nine or ten cases of meningitis, and of Professor Piorry—we thought it right at that time, and in subsequent editions of our work, to express doubts of this new application of the stethoscope, and were led to dispute, if not the reality, at least the importance of auscultation of the brain. Still I always regretted this summary condemnation of the undoubtedly conscientious labours of two professional brethren. That results stated in America as certain should be absolutely and generally denied in Europe seemed not a little extraordinary; and we must either suspect the mode in which the physicians on the other side the Atlantic made their observations, or confess that in this hemisphere we were deaf to sounds distinctly heard in the other. Shall we say with Harvey's adversary, the old Venetian physician, "*quem nos surdastrî audire non possumus*:"—"in Europe people are deaf; they only hear that in America '*tantum modo in America exaudîtur*.'"

As the only means of deciding the question was by making more minute clinical observations, I devoted myself patiently to this difficult task, and began afresh the study of cerebral auscultation. My researches were almost exclusively among children,* because it is chiefly among them, when at the breast, that Drs. Fisher and Whitney said they heard the stethoscope phenomena, the discovery of which they announced; and because the difficulty of diagnosing diseases of the brain is greater in childhood than in later life, a greater interest belongs to the progress which symptomatology would make in this department. I may add in passing that it is only among children, whether subject or not to cerebral disease, that auscultation of the brain is likely to be of use; for beyond a certain age, or beyond a certain period of early childhood, the most practised ear applied to the cranium cannot detect morbid cephalic bruits. Since I began collecting the observations which form the subject of this memoir, several authors have been similarly engaged in cerebral auscultation, among others, MM. Rilliet and Barthez, and M. Heunig, head of the Children's Hospital at Leipsic. The

* I have never been able to detect any cephalic bruit among adults, either in apoplectic patients or young chloro-anæmic females.

first, in their admirable work (2nd edition, 2 vols., pp. 158-9), make some remarks on the cephalic souffle in cases of the hydrocephalus and in rachitis; I shall have occasion to quote the passage where they speak of this bruit under the head of the diagnosis of these affections. The German author has written a monograph upon this subject, and in a pamphlet of not less than thirty pages (*Archiv für physiologische Heilkunde*—Stuttgart, Aout, 1856), he reproduces, with annotations and additions, the inaugural thesis of Dr. Wirthgen (*De strepitu qui in capite auscultando auditur*, Leipsic, 1855), which, indeed, appears to owe its birth to him, and in which he successfully studies the normal and abnormal bruits discovered by cerebral auscultation, the seat of those bruits, the age at which they are heard, the physiology and pathology, and especially the mechanism of their formation, and from these he deduces the results which the physician may expect to find in practice. I had completely devoted myself to this study before I became acquainted with the researches of M. Hennig, and we shall see, by the details of my observations, how far my conclusions agree with his.

Perhaps the admirable work of the Leipsic physician is faulty from a want of method and perspicuity, of which French readers complain greatly in the writings of the learned German author. M. Hennig does not give with sufficient clearness the details from which he drew his deductions, nor his mode of proceeding in collecting facts; the number of cases from which he decides (and they do not appear to be very numerous) are not indicated with precision; all this necessarily diminishes the value of his statements. In order that I may not incur the reproach just cast upon the German author, I may say that the conclusions which are recorded in this paper were drawn from an examination and comparison of a very considerable number of observations, their total being nearly 300. At first they were gathered from cases selected among children whom I thought were affected with cerebral disease, or who were the subjects of rickets; then (having determined the existence of a cephalic souffle among children of a healthy appearance), I afterwards examined all cases indiscriminately, whether in the wards of the Hospice des Nouveaux Nés, the Hôpital des Enfants, or in private practice.

PLAN OF THE MEMOIR.—Having made these preliminary observations, we come now to the study of facts, and after having traced out the rules which facilitate auscultation of the head, I shall point out what *physiological bruits* the ear discovers when applied to the cranium; and in a third chapter, the longest and most important, *morbid bruits* will be specially considered.

Section 1.—Rules for Cerebral Auscultation.—When a patient is submitted to stethoscopic examination, the most convenient position is the horizontal, with the head placed upon a pillow slightly raised; this may be inclined to different sides, according as it is desirable to examine the occipital, frontal, or temporal regions, &c. In examining an infant at the breast it should be seated on the knees of its mother or nurse, and the head should, if possible, be held steadily, either by the hands placed softly on either side, or by leaning it

against the mother's breast. If the patient be in a comatose condition from some cerebral affection, auscultation will be easily performed. It becomes difficult when the child cries or moves about, which is usually the case; we must then try to quiet it by suckling, and auscult it while it is at the breast, the bruit of deglutition being no obstacle to the recognition of morbid cephalic bruits. If the examination be impossible while awake, it must be abandoned till an attempt can be made in quieter moments, or we make the attempt during sleep, which is generally sufficiently profound not to be disturbed by the examination of a physician. The auscultation may be either *indirect* or *direct*. Dr. Fisher found the latter the most convenient, the ear adapting itself exactly to the rounded or projecting surface of the cranium. Care must be taken to prevent the rustling of the hair; also, as a matter of cleanliness, the child's head should be previously covered with a napkin, which may serve at the same time to keep it more firm. Auscultation, practised thus directly, possesses some advantages; whatever may be the cries or agitation of the little patient, one always finds, in applying the ear quickly and somewhat firmly to the middle of the anterior fontanelle, that we catch, so to say, the sound of a cephalic souffle. But when the child is asleep, or when it is willing to remain quiet, mediate auscultation is preferable; it allows the detection of the bruits with greater precision and exactness, and we may also isolate them, so that those which are natural are not confounded with those which are abnormal. For this purpose the ordinary stethoscope, which has been generally substituted for the primitive cylinder of Laennec answers perfectly; held as a pen in writing, it should be applied over the different regions of the cranium, and be kept fixed in the same way as for auscultation of the vessels of the neck. M. Hennig recommends the employment of a flexible stethoscope, twenty-three centimètres long, having for its middle portion a tube of vulcanized Indian-rubber. This stethoscope is certainly preferable, for with it we can easily follow the movements of the child during the examination. On what regions of the head should the instrument be applied in order the better to detect the physical phenomena? If Drs. Fisher and Whitney are correct, the bruit of the cephalic souffle is so evident that it suffices to apply the ear to any part of the cranium in order to discover it immediately; but our experience does not bear out this assertion. It may be true that the bruits of nasal respiration and of deglutition are perceptible over nearly the whole surface of the head, but this is certainly not the case with the genuine cephalic souffle, which we have most frequently heard in the region of the anterior fontanelle, and still more plainly when we auscult directly over the fontanelle itself. It gradually diminishes in intensity the further we remove from that point, which appears to be the centre whence the bruit starts; then gradually becoming more feeble along the parietal or frontal sutures, it is completely lost further away, the finest ear failing to discover any sound over the lateral surfaces of the cranium and the occipital protuberances. The physician who cannot count for long on the docility of his little patient would do well, if he wishes to

detect the cephalic bruit, at once to place his stethoscope on the summit of the cranium over the depression corresponding to the anterior fontanelle; it is there, as we have said, that the abnormal bruit exists in its greatest intensity, and the examiner, if he does not detect it at that point, may dispense with any further investigation.

SECTION 2.—*Physiological Bruits*.—When we practise auscultation on the top of the head of a healthy subject, different bruits are heard.

1. One is produced by the circulation of the air in the nasal fossæ; this is the *cephalic bruit of respiration* mentioned by Dr. Fisher; it is very intense and harsh, and analogous to the laryngeal respiratory murmur; it coincides with the respiratory movements, increasing in strength and frequency when these are accelerated. These characters are sufficient to distinguish it from other cephalic bruits; but in some cases of extreme dyspnoea the nasal respiratory bruit is so frequent and quick, that it might easily be mistaken for the cerebral vascular souffle of which we have just spoken, and the two phenomena might be confounded were it not for the close relation which the first bears to the movements of the thorax. When the pituitary membrane is thickened, or there is much secretion of mucus, the respiratory cephalic bruit is transformed into a sibilant rhonchus, or into a kind of coarse crepitation; the same physical conditions of the mucous membrane exist as in bronchitis, and consequently the same râles are heard. Nor is this all: in affections of the larynx, the bruits caused by the passage of the air along the laryngotracheal tube are much drier and more or less prolonged, extending above into the nasal fossæ as well as into the bronchial tubes below, and the rhonchus or laryngeal hissing (similar to the bronchial râles) everywhere heard is more perceptible in auscultation of the head than it is in that of the chest. With regard to the râles formed in the lungs, these are not heard from so great a distance, and they escape stethoscopic examination when practised on the head: in the very exceptional case of a young phthisical girl I was able to detect, by cerebral auscultation, a loud gurgling, which was produced in a cavity in the sub-clavicular region.

2. If the child speaks or cries, the *vocal sounds* are heard very distinctly, and the ear, when applied to different parts of the cranium, perceives a very remarkable resonance: this *cephalic resonance* may be compared to that which is heard so loudly in the larynx; it has a nasal timbre which varies in different individuals, it is always very piercing, the voice seeming to proceed from the cranium.

3. Placing the stethoscope on the head another peculiar bruit may be heard, that of deglutition; in new-born infants there is also that of suction. This bruit is so singular and so readily recognised, that there is no need to describe it. We hear it more distinctly by direct than indirect auscultation, and in cases where the nurse appears to have but little milk, and when consequently the child makes frequent efforts at suction without our being able to decide the fact of its having swallowed anything, we may be able to determine this

by cerebral auscultation—the bruit of deglutition comes very strongly upon the ear, and we are therefore better able to appreciate the quantity of milk supplied and swallowed. Such are the *extrinsic bruits* revealed by cerebral auscultation; moreover, it is not impossible to a practised ear to hear in some subjects, especially in cases of palpitation, the two sounds of the heart propagated from the solid walls of the cardiac region up to the head. In forty-two healthy infants five times I was able, with attention and patience, to perceive the tic-tac of the heart in ausculting over the cranium. In another case I have been able to hear a strong bellows-sound originating in the left auriculo-ventricular orifice; but this last case was exceptional. More frequently the cardiac sounds themselves escape observation in auscultation of the brain; and we may, for greater simplicity in studying the subject, omit the *cardiac cephalic bruit*, at least as it has been described by Drs. Fisher and Whitney. With much greater reason we shall contest the possibility of recognising with the ear the modifications which so-called cerebral diseases create; for example, Dr. Fisher says he is able to discover in almost every case (thanks to his aptitude for cerebral auscultation) the impulsive character of the pulsation which he supposes to belong to apoplexy. These, however, are minutiae of such exceptional cases (*rara non sunt artis*), and tend only to embarrass without enriching semeiology.

4. Are we, then, to include in the physiology of this subject an *intrinsic bruit*, the *cephalic souffle*, an essentially pathological phenomenon? On this point, those authors who have specially directed their attention to auscultation of the brain are far from being agreed. With the American observers, the souffle is always abnormal, it is never a healthy phenomenon. Dr. Fisher expressly says,—“It depends always upon some cerebral affection.” Dr. Whitney equally insists upon the proposition, that auscultation never reveals anything like a cephalic souffle in the normal condition. M. Hennig, on the other hand, believes that the souffle belongs rather to a state of health; and, further, this bruit, which according to the American doctors would be much more manifest as the cerebral affection became more marked, would, according to the Leipsic physician, sometimes disappear in sick children to reappear with returning health. If we seek among our own facts whether the American or German authors are right, the first declaring that in the normal state the cephalic souffle is never heard, and the second being of opinion that it is always heard, we incline to believe that both are equally wrong, and that these two exclusive opinions are alike to be condemned.—(*This article is translated by Dr. Meadows.*)

ART. 53.—*On the Pathology of the Pituitary Body.*

By Dr. MIDDLETON MICHEL.

(Pamphlet, pp. 21.)

The text of this essay is the well told case of a negro, aged 35, in which the cause of death was a soft malignant tumour within

the sella turcica, implicating the pituitary body and the neighbouring bony tissue to a considerable extent, and causing, among other symptoms, amaurosis and exophthalmia. The head symptoms were in no sense characteristic—nothing beyond what may be satisfactorily accounted for by the pressure of the morbid growth upon more essential parts of the encephalon. This case, indeed, is an additional reason for disregarding the old opinion which would attach high functional importance to the pituitary body. The essay was read at the South Carolina Medical Association, Feb. 1, 1860.

ART. 54.—*Case of Wound of the Spinal Cord.*

By Dr. E. BROWN-SÉQUARD.

(*Lancet*, August 9, 1862.)

CASE.—Mr. Fillmore, captain of a vessel, was stabbed in the neck in the harbour of San Francisco, on the 19th of October, 1853—nearly nine years ago.

He lost his consciousness instantly, and fell. The loss of blood is said to have been very abundant, and the patient thinks he was saved from dying from the hæmorrhage by some one who pressed on the wound. He remained unconscious from the time of the stabbing (about eight in the evening) until the next morning. During the night he was a little delirious and feverish; but since then there has been no fever and no cerebral symptom.

On recovering his senses he found that he was completely paralysed on the right side, and partly also on the left side, from the neck downwards. His sight, hearing, and other head senses were all right; his speech was not affected; he could swallow without difficulty, and move any muscle of the eye and face; his breathing was easy; the pulse weak and slow; no vomiting; there was no incontinence of urine or fæces; but he had to hasten to pass his urine when the need was felt.

He remained in the same state for many days, almost in a fainting condition, but perfectly conscious, except for a short time, nine days after the accident, when, on seeing a friend, he fainted away completely for a little while.

For two or three months he was completely unable to turn himself in bed, and it was only after four months that he could stand a little on the left leg.

The wound, it seems, did not cause much pain, and healed pretty quickly. The movements of the head and neck became quite free as soon as the wound healed.

Slight symptoms of inflammation of a part of the right side of the cord—such as twitchings and jerkings, or trembling, with pricking and other kinds of pain—soon appeared after the accident, and still exist.

Gradually, but very slowly, the patient became better, and when I saw him for the first time, a year ago, he was in the following condition:—

His general health was pretty good. No symptom in any organ of the head and face except what I will mention in a moment.

The cicatrix of the skin is a little more than an inch long. It is at the upper part of the neck, on the left side, about an inch from the posterior surface of the skull; its direction is parallel to the axis of the body.

The right arm and leg are stiff and paralysed, but incompletely; the left arm and leg have recovered their full power as regards motion.

As regards sensibility—

1st. The tactile sensibility is increased in the paralysed lower limb, and very much diminished in the left limbs. In both the upper limbs there is a marked degree of anesthesia.

2nd. The power of recognising the place where a tactile impression is made is lost in almost every part of the limbs which are not paralysed (the left limbs), and a little also in the upper limbs on the paralysed side.

3rd. The sense of tickling is very much increased in the paralysed limbs, and lost in the others. He burnt himself often without being aware of it.

4th. The sense of temperature (both for cold and heat) is lost in the non-paralysed limbs, and much exaggerated in the paralysed ones.

5th. The guiding sensations from muscles were lost in the paralysed limbs for some time, but have now returned.

(B) CONCERNING THE RESPIRATORY SYSTEM.

ART. 55.—*Report on Pneumonia.*

By Dr. AUSTIN FLINT.

(*American Medical Monthly*, April, 1862.)

This Report is drawn up by Dr. Austin Flint, on behalf of a committee of the New York Sanitary Commission on Pneumonia. It throws important light upon the treatment of pneumonia in America:—

Of the diseases which the army surgeon must expect to encounter in the present unhappy contest in America, pneumonia is one of the most important. The disease has already prevailed to a considerable extent among the troops on the Potomac and in the West; but it will, doubtless, prevail to a much greater extent during the months of winter and spring. It prevails habitually much more among the inhabitants of the Middle and Southern States than at the North. It will be more likely to occur among Northern soldiers in a Southern climate than among native or acclimated residents. Statistics show that it occurs much oftener among those who are exposed to the vicissitudes of the weather than among those whose occupations involve confinement within doors; hence it may be expected to prevail especially among troops in active service. Not only the prevalence, but the gravity, of this disease is greater in the Middle and Southern than in the Northern States. A larger ratio of deaths in the former than in the latter is to be expected. In sections in which the periodical fevers are rife, pneumonia is apt to be extremely fatal. This is the uniform testimony of physicians practising in malarious regions, especially at the South. These considerations show sufficiently the importance of the subject of pneumonia at this time to the army surgeon. But others may be added. Not only has pneumonia been studied, within the last few years, with diligence and success, as regards its morbid anatomy, symptomatic phenomena, pathological character and laws, but, perhaps, on no other important inflammatory affection has clinical observation been brought to bear so fully and efficiently as regards the manage-

ment. In the first place, abundant facts have been collected respecting its course when uninfluenced by active medication—the true point of departure for the satisfactory study of therapeutics, as applied to any disease. And, in the second place, data have been afforded for judging of the value of different methods of treatment. As a consequence, a considerable change has taken place in the opinions and practice of not a few members of the medical profession with respect to the management of pneumonia. Therapeutical measures, which, but a few years ago, were generally regarded as essential to its successful treatment, are now by many deemed often needless and hurtful. On the other hand, measures formerly considered to be uncalled for and hazardous, are now thought to be highly important in certain cases. Believing that, after making due allowance for a tendency to pass to opposite extremes, which characterizes the fluctuations of medical doctrines, a real and truly important progress has been made of late in practical views respecting this disease, it is not unreasonable to suppose that, of those who have been called by the present contest from civil to military practice, some may not have given much attention to the subject, and, therefore, adhere to views which, with our present knowledge, are not tenable. Many of the medical officers of the army have seen but little of the disease in comparison with the opportunities for observation which will now be opened in their new sphere of action. Moreover, most of those who are entering upon military experience have seen but little of pneumonia as it will be presented to them in soldiers occupying the Middle and Southern States. These last-mentioned considerations, doubtless, have been in the minds of the Sanitary Commission, at whose instance this report is submitted. It is hardly necessary to say that the discussion of questions relating, directly or indirectly, to the management of pneumonia, would be here out of place. The purpose of this report is to premise a few propositions, embodying certain pathological facts, having obvious relations to the management of the disease; and then, with reference to the leading indications for treatment, and the employment of different therapeutical measures, to present, as concisely and compactly as possible, the practical views which appear to the committee to be most consistent with our present knowledge of the disease, and with the results of clinical experience.

1. Ordinary pneumonia, uncomplicated, and not extending over more than a single lobe, does not, *per se*, involve much, if any, danger to life. The truth of this statement has been shown by large collections of cases in which the disease has been allowed to pursue its course without medical treatment, or with only palliative remedies. A fatal termination, therefore, in such cases, must depend on circumstances incidental to the disease, or on injudicious interference. It is obvious that, when active measures of treatment are indicated in such cases, the indications are derived from the incidental circumstances more than from the disease itself.

2. The disease is much more grave, and becomes dangerous to life, when it invades more than a lobe, affecting an entire lung, or, more rarely, portions of both lungs (double pneumonia). The greater

proportion of these cases is one of the reasons of the greater fatality of pneumonia at the South. In many of these cases, however, recovery takes place, and the symptoms do not always denote greater gravity or danger. A source of gravity in these cases, to which attention has not been sufficiently directed, is the large amount of exudation-matter deposited in the lungs. In fatal cases, in which an entire lung is solidified, the increased weight of the affected lung, due to the solidifying deposit, may be as high as four pounds. This large quantity of matter is, of course, withdrawn from the solid constituents of the blood.

3. The complications of pneumonia account for the danger to life in certain cases. One of the most serious complications is pericarditis. This occurs oftener at the South than at the North. This complication does not render the termination necessarily fatal. Patients may recover even when, in addition to this complication, an entire lung is involved. A degree of pleurisy exceeding that generally co-existing with pneumonia, and attended by considerable effusion (which is rare), accounts for the danger in some cases. It may be remarked here, that the co-existing pleurisy is the source of acute pain in pneumonia. Pneumonia, without pleurisy, is attended with little or no pain. Intermitting fever and pneumonia may be associated—each affection serving to mask, to a greater or less extent, the other. This complication is attended with great danger, and calls for prompt and efficient measures of treatment addressed to the intermitting fever. In the intemperate, delirium tremens is apt to become developed, and prove a serious complication, claiming efficient treatment. Cholæmia, or jaundice, is occasionally an incidental event in pneumonia. It does not, however, denote an important hepatic complication, and does not call for active remedies designed to act upon the liver. The propriety of recognising “bilious pneumonia” as a variety of the disease may fairly be questioned.

4. Pneumonia occurs as a complication, or secondary affection, in the course of other diseases. Its occurrence in rubeola is not unfrequent. It is apt to occur in the continued fevers, typhus and typhoid. It adds much to the danger in these diseases. An important distinction is involved in typhus or typhoid fever, complicated with pneumonia, as compared with the so-called typhoid-pneumonia. In the one case, the primary disease is the continued fever, the pneumonia being developed secondarily; in the other case, the pneumonia is the primary disease, certain symptoms becoming developed which denote what is commonly known as the typhoid condition.

5. The general and local symptoms accompanying pneumonia, when primary and uncomplicated, differ widely in different cases, and in these differences have originated certain varieties of the disease generally recognised by authors. When accompanied by high febrile movement—a full hard pulse and a hot skin—it has been called sthenic and frank pneumonia. Examples of this variety are oftenest seen in young, robust subjects, residing in healthy rural situations. When, on the other hand, the phenomena belong-

ing to symptomatic fever are not present in a marked degree, the pulse and skin denoting diminished power of the circulation, the disease is said to be asthenic. In each of these varieties the local affection, so far as it can be appreciated by the physical signs during life, or by examination after death, may be the same. It is an expression of a well-known pathological fact, applicable alike to this and other inflammatory affections, to say that with a similar amount of inflammation, different cases differ extremely as regards the disturbance of the system. The system appears to tolerate differently the same affection in different cases. And it is obvious that the management must have reference to the condition of the system quite as much as, if not indeed much more than, to the local affection. In cases presenting passive delirium and adynamia, the disease is called typhoid pneumonia. Here, too, the gravity and danger relate not so much to the local affection as to the general condition; and here, also, the treatment is to be governed more by the general symptoms than by the degree or extent of the inflammation.

6. The rapidity with which the exudation takes place in pneumonia, sufficiently to solidify the affected portion of lung, is of importance with reference to treatment. Different cases differ in this regard; but it is not unusual to find the physical signs of complete or considerable solidification (bronchial respiration and bronchophony) within twenty-four hours after the date of the attack, and frequently this occurs in the course of forty-eight hours. Hence, were it possible to prevent this result, it must be by therapeutical measures which act with a promptness commensurate with the rapidity of the exudation.

7. Other important facts relate to the removal of the exudation. It is removed chiefly, or exclusively, by absorption, not by expectoration. The source of the expectoration in pneumonia is mostly, if not entirely, from coexisting circumscribed bronchitis. This fact has an obvious bearing on the use of remedies called expectorants, or, on the other hand, on the use of remedies which are supposed to interfere with expectoration. It is well known that pneumonia may be completely latent so far as cough and expectoration are concerned. The removal of the exudation may go on with great rapidity, even when no active measures of treatment are employed. In this respect cases differ greatly. It is certain that, before the natural course of this disease had been observed, the more or less rapid disappearance of solidification, occurring naturally, was often attributed to remedies supposed to act as sorbefacients. The complete removal of the exudation in favourable cases, leaving the pulmonary structure intact, is an important as well as highly interesting fact. The tendency to run into a chronic form, as is well known, does not belong to this disease. It is rare for it to eventuate in the third stage, or the stage of purulent infiltration, even in fatal cases. Abscess and gangrene are also results extremely infrequent. With a few exceptions, it may be said that resolution of the affected lung is sure to take place if the life of the patient be sufficiently prolonged. This fact has a very important bearing on the indications for treatment.

8. In the majority of the cases in which pneumonia proves fatal, the mode of dying is by asthenia, rather than by apnoea. The patient rarely dies in consequence of the extent to which the respiratory function is compromised. It is not unusual to observe complete solidification of an entire lung with very little embarrassment of breathing. The fatal termination is much oftener due to failure of the powers of life. This is true of the different varieties of the disease, and of cases in which the disease is complicated or uncomplicated.

The indications for treatment in cases of pneumonia must have regard to the stage of the disease. When patients are seen in the first stage,—i.e., prior to solidification of the affected lobe, important objects of treatment, if attainable, doubtless are the limitation of the inflammation, the prevention of exudation, and the restriction of the local affection to the lobe first invaded—in other words, the arrest of the disease. Are these objects attainable? With our present knowledge, this question resolves itself into another,—viz., Will the antiphlogistic method of treatment, so called, of which bloodletting is the most prominent measure, control the disease? Clinical experience certainly warrants the assertion that this method of treatment cannot be relied upon for effecting the objects just named. If this method ever succeeds in arresting pneumonia, the chance of success in any case is too small to justify its employment whenever it comes into conflict with other indications, or, in other words, whenever it will be likely to do harm if it do not succeed. Abortive measures, other than those commonly known as antiphlogistic, do not require notice, and indeed there are none at the present moment before the profession.

Putting aside arrest of the disease as an object of treatment in the first stage, the inquiry arises, may not active measures in this stage so influence the disease as to diminish its intensity, and thereby the danger, aiding the patient to pass through it more safely and comfortably, if not more quickly, than if the measures were not employed; and will not bloodletting conduce to these desirable ends? A candid review of the discussions which have taken place within the last few years respecting bloodletting in pneumonia, together with the results of clinical experience, can hardly fail to lead to the conviction that, employed indiscriminately, it will do much more harm than good. This, it must be admitted, may be true, and yet bloodletting be useful in certain cases. Its usefulness is limited to cases characterized by high febrile movement, the patients being robust or of a full habit, and of course the disease not advanced to the second stage, when a pound or more of solid matter has been withdrawn from the blood to constitute the solidifying deposit. The abstraction of blood, if the pulse be strong, the skin hot, and the pain severe, with more or less dyspnoea, will undoubtedly afford relief, and sometimes, perhaps, place the patient in a better condition than if no active treatment had been resorted to. But even in the cases to which bloodletting is to be restricted, if employed at all, may not other measures be substituted, which will accomplish the same ends, without the spoliative effects of that

remedy? We think this question may generally be answered in the affirmative. Bloodletting in these cases is not so much a curative as a palliative remedy. It is addressed, not directly to the local affection, but to the symptomatic febrile movement, and can only influence the local affection indirectly in so far as the latter is intensified by the former. Now, the febrile movement may be not less efficiently restrained by saline purgatives and by the nauseant and arterial sedatives, of which antimony and the *veratrum viride* may be named as the most reliable. The salines deplete without the loss of the blood-corpuscles, or spoliation, and the sedative remedies diminish the frequency and force of the heart's action. These remedies, then, may take the place of bloodletting certainly in the great majority of the cases in which this measure would be admissible if substitutes were not to be found.

Antimonial preparations and the *veratrum viride* are potent remedies, which are only to be employed to meet certain indications. They may do much harm if injudiciously or indiscriminately employed. They are indicated in cases in which the pneumonia is said to be frank or sthenic. They are to be given with great circumspection when, from the previous health, the constitution of the patient, or other circumstances, danger is to be anticipated from failure of the vital powers. They are never to be carried to the extent of producing marked depressing effects. The benefit to be obtained from them can be secured without these effects. They are not given to influence the local affection directly, but only through their action upon the circulation. They are imperatively contra-indicated whenever the action of the heart, as represented by the strength of the pulse, denotes a tendency to failure of the powers of life. Given or persisted in, under these circumstances, they will contribute to the danger of death by asthenia.

Relief of the acute pleuritic pain which belongs, in some cases, to the first stage of pneumonia, is an object of treatment. Restraining the movements of the affected side, pain induces fatigue, from the increased frequency of the respirations, and conduces to suffering from dyspnoea. Local measures will do much towards this object. A considerable number of dry cups is an efficient measure. Wet cupping should be limited to cases in which the loss of the blood abstracted by this mode will be well borne.

Stupes with water only, or with some stimulating application, such as the spirits of turpentine, often afford marked relief. The oiled muslin jacket contributes to comfort by keeping the surface of the chest moistened with perspiration, and, if a flannel covering be added, all the advantages of a poultice or the water-dressing are secured. It is hardly necessary to say that blisters are inadmissible, certainly in this stage. There need be no reluctance in prescribing opium in this stage for the relief of pain. The value of opium for other objects will claim attention presently.

If the phenomena of intermittent fever are developed, quinia should be given promptly and in efficient doses. The paroxysms should be arrested as speedily as possible. The patient may be placed in great danger by their repetition. The existence of the

pneumonia and the degree of symptomatic febrile movement in no-wise conflict with this important indication; indeed, so far from conflicting with it, the sedative influence of full doses of quinia may be useful, aside from the arrest of the paroxysms. In a malarious region, or if the patient have been subject to attacks of intermittent fever, it is judicious to forestall the possible development of the latter affection by moderate doses of quinia. It is a good rule, in such cases, to commence at once with the use of this remedy, irrespective of the liability to the occurrence of intermittent paroxysms. The malarious cachexia impairs the power of resisting the disease; hence its greater fatality in malarious regions, even when uncomplicated with intermitting fever.

ART. 56.—*Oxygen Gas in the Treatment of Threatened Asphyxia in Croup.*

By Dr. MIQUEL.

(Schmidt, No. 8, 1862.)

Dr. Miquel has been led, from his observation of the direct ratio which recoveries from croup bear to the complete aëration of the chambers in which the patients lie, to try the effects of the inhalation of an atmosphere containing more than half its volume of pure oxygen gas. In the case of a child, a year and nine months old, who had been labouring for nine days under symptoms of croup, which had lately become much aggravated with signs of urgently impending asphyxia, Dr. Miquel determined, as all other remedies had failed, to try the oxygen. A gasometer was filled with a mixture of oxygen gas and atmospheric air, the former somewhat preponderating in quantity. This mixture was impelled from the gasometer, by a moderate water pressure, into the patient's mouth, through an india-rubber tube; it did not appear to incommode the child, and the inhalation was continued for fifteen or twenty minutes. At the end of this time the pulse had become more perceptible and less frequent, the countenance less anxious; and the cough, which had previously been infrequent, was now heard more often, though still with the croupal tone; spontaneous vomiting also followed the cough; the convulsive twitchings of the muscles ceased, and the patient fell into a sleep of considerable duration. On the following morning the child was altogether much better, and although the distress of breathing returned in a diminished degree in the evening, the case proceeded to a favourable termination. Dr. Miquel only regards the inhalation of oxygen as a palliative remedy against impending asphyxia, but in this point of view he considers it to be most useful, and that it acts not only directly, by increasing the oxygenation of the blood, but indirectly, by raising the vital powers, and thus enabling nature to employ her own means of combating the dyspnoea.

ART. 57.—*On Certain Cases of Simulating Early Phthisis, and their Diagnosis by the Laryngoscope.*

By Dr. S. D. BIRD.

(*Australian Medical Journal*, April, 1852.)

Dr. Bird's object is to insist on the importance of the laryngoscope in the diagnosis of diseases of the lungs, and particularly of a form of congestion of the trachea, dependent on stomach derangement, whose symptoms often strongly resemble those of incipient phthisis.

"Every medical man is aware of the difficulty which attends the making sure of the existence of tubercle in the lungs in its earliest stage of development; and the frequency of the scrofulous diathesis in all classes makes us but too ready to put down all doubtful cases, in which the stethoscopic signs are uncertain, as instances in which time only is required to bring forth the disease in an unmistakeable form.

"Hæmoptysis, in conjunction with wasting and morbid sounds of any kind in the upper lobes of the lungs, are sufficient grounds in the minds of many for pronouncing a decided diagnosis of early phthisis. The stethoscope, too, is an instrument whose refinements cannot be mastered by all. Many men, in spite of constant practice, cannot educate their ears to appreciate the slight variations of the natural murmurs that characterize the first stage of tubercular deposit between the air cells. In short, a man must have a musical ear to be a good stethoscopist. An instance has lately come under my own knowledge, in which a patient received four widely different opinions as to the physical signs in his chest, from four well-known physicians in London, all good stethoscopists and men of the first repute. But it is unnecessary to dwell upon a fact that must be evident to all, that an instrument which enables us to call in the aid of the sense of sight must be of the greatest value in the diagnosis of disease of the chest.

"The following is a case which all will recognise to be of not unfrequent occurrence.

"A man of business, of no very decidedly consumptive family, accustomed to live well and take a considerable amount of stimulus, has been complaining for some weeks of dyspepsia, acidity, shortness of breath on exertion, and palpitation of the heart. He has lost flesh, has a short hacking cough, and his pulse and breathing are rather fast. One morning he hawks up some bright blood and, alarmed, consults his doctor, who finds a loose roughness on inspiration in the upper lobes on both sides, and an occasional bronchial râle, confined entirely to the large tubes.

"Such a case may be, and not unfrequently is, confounded with incipient phthisis and is treated with cod oil, tonics, and stimulants; the dyspeptic symptoms being neglected, as they are supposed to depend on the lung disorder. But such symptoms I believe very commonly to arise from irritation of the stomach; a sluggish liver, the result of a sedentary life, and unhealthy gastric secretions from



deficient nervous supply—the result of over-exertion of the mind, create a longing for stimulating foods and drink, which, though they give momentary relief, in time set up an irritability of the mucous membrane, and particularly of the secreting follicles.

“If such a case be neglected, the irritation may spread along the œsophagus to the pharynx, and then turn into the larynx, whose mucous membrane takes on an action similar to that of the stomach: the glandulæ pour out a viscid secretion and at length ulcerate, and hæmoptysis results. The trachea and large bronchi sympathize, and râles, varying in intensity, are heard, often sufficiently similar to those caused by irritation of the lung substance, as to puzzle the listener not a little, especially when the wasting hæmoptysis and dyspnœa are considered. But an examination with the laryngoscope at once puts an end to doubt; we see the red congested membrane studded with enlarged and ulcerated glandules, and in all probability the particular ulceration from which the hæmoptysis proceeds. Such a case is not unlike one of aggravated clergyman’s sore throat; but there is less hoarseness, the trachea rather than the larynx being the principal seat of irritation.

“If such a case be treated by tonics and stimulants, to the neglect of the digestive organs and the throat, no improvement will take place, and it may degenerate into actual phthisis.

“We are all conversant with the stomach complications of phthisis, and know that often these are the principal sources of complaint in consumptive persons. I remember, in the year 1854, when House Physician at the Consumptive Hospital at Brompton, opening the body of a man who died of phthisis without cough or chest pain of any kind, his only symptoms being constant vomiting and rapid wasting. His lungs were found to be stuffed with crude tubercle, the lung structure not being at all broken down. The stomach and bowels were healthy, the vomiting having been purely sympathetic, like that of pregnancy.

“The class of cases to which I wish to draw attention are the converse of this. The disease is propagated from the stomach to the air passages, either by sympathy, or more commonly by direct progression along the continuous mucous membrane of the alimentary and respiratory tracts.

“The treatment of such cases is constitutional and local: first, by the avoidance of all stimulating food, drink, condiment, or medicine; the administration of the alkaline carbonates, particularly potash and soda; the daily use of horse exercise; the shower-bath and the Turkish towel, and abstinence for a time from the worry and fatigue of business. Secondly, local, by daily swabbing the throat, and, if possible, the larynx, with solution of caustic, after the well-known method of Dr. Horace Green.

“By these means the hæmoptysis usually ceases at once, or at all events after two or three applications of the caustic; the cough and spitting subside with the dyspnœa and palpitation as the gastric secretions return to their healthy state; the skin gets clear and the tongue clean, and our patient once more feels himself.

“It is obviously of the highest importance that we should be able

quickly to distinguish a case so amenable to treatment as this from one of phthisis, whose prognosis must always be very doubtful. How many persons, before the invention of the stethoscope, must have been condemned as phthisical from general symptoms, their prospects in life blighted, and a gloom thrown over their future,—enough of itself to develop both mental and bodily disease. The judicious practitioner of the present day is very guarded in pronouncing a diagnosis of tubercle from those over-refinements of the stethoscope to which the constant study of chest complaints has led. We are so much in the habit of auscultating only those who have avowedly some chest symptoms, that the normally differential sounds of the two lungs is a fact often omitted from consideration. Army surgeons and the medical examiners of insurance offices, who are constantly auscultating healthy people, are well aware that it is very uncommon to find a person with what we have been taught to consider a normal chest, that is, equally clear on percussion on both sides and with no difference of respiratory sounds. Some slight want of symmetry of the two sides, a casual adhesion of pleura, which few persons have not, or many circumstances quite consistent with a healthy state of the lung substance, may cause difference of percussion and breathing appreciable by a practised ear; and if with these hæmoptysis and other symptoms incidental to phthisis co-exist, most men would consider themselves justified in giving a diagnosis of that disease.

“That such symptoms may depend entirely upon deranged digestion, I am convinced, from the result of a number of cases in which the laryngoscope would have been a most valuable aid to the early formation of a hopeful opinion. The physical signs in the chest may possibly be explained away, but the hæmoptysis remains a stumbling-block in the eyes of both patient and doctor, which they cannot get over. But if, as I have seen myself, the blood may be perceived oozing from the ulcerated glands, the one may apply his remedies with satisfaction, and the other has a load moved from his mind which has clogged his hopes like an incubus.

“The recent invention of the laryngoscope does not allow of statistics being brought forward of sufficient amount to enable us to form any definite opinion as to the appearances in early phthisis; but so far as our present limited experience goes, the larynx and trachea present no abnormal appearances till the disease is so far advanced as to leave no doubt of its existence in the lungs.”

ART. 58.—*On Arterial Murmurs in Incipient Phthisis.*

By Dr. W. S. KIRKES, Assistant-Physician to, and Lecturer on Medicine at, St. Bartholomew's Hospital.

(*Medical Times and Gazette*, May 17, 1862.)

In the first of a series of Clinical Essays lately published, Dr. B. W. Richardson alludes to a former paper, by Dr. Kirkes, on the subject of “Subclavian Murmur.” This paper was read before a

private society for the study of chest diseases, in April 1888. Its publication was delayed in order to afford time for further observations, so that a more complete account of the subject might be given. Other gentlemen, however, having interested with this intention, and Dr. Latham's investigations having so successfully supplied much that was wanted in the clinical history of this peculiar physical sign, Dr. Latham is induced now simply to put the paper exactly as it was originally read, making only one additional remark: namely, that repeated subsequent observations have convinced him more and more of the value of this sign in many doubtful cases of incipient tubercular disease of the lungs.

The fact that a murmur is heard coincident with the heart's systole, but independent of any cardiac disease, may, in many cases of incipient phthisis, be heard in one or other subclavian region, has long been known. Dr. Oliver Ward first publicly directed attention to this fact in the *Medical Gazette* about twenty years ago. Therein he speaks of "a peculiar murmur heard in certain parts of the chest of persons presenting symptoms of phthisis," and he says, "it occurs in such parts of the chest as percussion or auscultation would indicate as the seat of crude tubercles." Dr. Latham, however, was probably then, if not long before, familiar with the murmur in question; for in his *Clinical Lectures on Diseases of the Heart*, delivered many years ago at St. Bartholomew's Hospital, he speaks very strongly about it, though at the same time it must be observed that his remarks only apply to a murmur heard in the situation of the pulmonary artery and not high up in the subclavian region. It is clear that Dr. Latham was quite familiar with these arterial murmurs, and that he attached some value to them as a diagnostic sign of phthisis. Since this account was published, however, very little has been written on the subject, casual allusion to it in various works on diseases of the chest being nearly all to be met with. The subject, however, deserves further examination, especially since the murmur in question is frequently attendant upon incipient phthisis, and also since there is often so much obscurity in the other physical signs of early tubercular deposit in the lungs—a little feebleness or coarseness of the vesicular murmur, slightly prolonged expiration, and a somewhat diminished resonance on percussion being nearly the only manifestations of incipient phthisis; and even these are often of very doubtful nature, and rarely exist in a marked degree until a considerable amount of deposit has taken place. Any additional physical sign, therefore, by which the diagnosis of incipient phthisis may be facilitated cannot fail to be of value, especially if it be one easy of detection, such as a well-marked arterial *bruit*.

It may be as well to mention some of the more striking peculiarities by which the murmur in question is distinguished from most other forms of murmur.

1. First, it may be repeated that the murmur is independent of a murmur in the region of the heart; this is an important point, for if a cardiac murmur existed, its transmission might, of course, be supposed to explain the one heard in the subclavian region; but

again and again Dr. Kirkes has found the heart's sounds quite healthy when the subclavian murmur was well marked. The conclusion arrived at, therefore, must be that the murmur has its origin at or about the part where it is heard, and not in the heart.

2. Next, as to the situation of the murmur. Dr. Latham speaks of it only as occurring in the neighbourhood of the main trunk of the pulmonary artery, and therefore limited to the left side of the chest, and to that part of the left side where the pulmonary artery is situated, namely, the junction of the second and third costal cartilages and their intervening space to the sternum. But according to the author's observation, it occurs, even more commonly, much higher than this situation, close under the clavicle, especially towards the humeral end of the bone; and, moreover, it occurs nearly, if not quite as frequently, on the right as on the left side of the chest; in fact, it occurs on that side and in that situation where we often have reason to suspect the existence of tubercular deposit.

3. Then there are certain peculiarities in the murmur itself. Its intensity varies greatly, ranging from the faintest whispering bellows-murmur to a loud, harsh roaring sound. On one occasion, a man with symptoms of phthisis presented such a loud and rasping murmur in one of the subclavian regions that Dr. Kirkes suspected he had an aneurism there; but on examining him again, a few days afterwards, the murmur had almost completely disappeared; and subsequent observation of the case proved that it was simply one of the class we are considering. This variableness in intensity of the murmur, even in the same patient, is another striking peculiarity which it often presents. Even while listening, a murmur which was harsh at first will often gradually become fainter, and may even completely disappear for a while. So fugacious indeed is the murmur sometimes, that the author has frequently known it disappear and reappear several times while a patient has been under examination. It may often be noticed, too, that the murmur is much influenced by the respiratory movements; its intensity being often greatest at the end of full inspiration, or just at the time when expiration begins. Sometimes, indeed, the murmur is heard only at that time, disappearing completely during expiration, and only occurring again at the end of the next full inspiration. Its intensity is influenced, too, as is that of most other systolic murmurs, by the degree of vigour with which the heart is acting; being loudest when the heart is contracting vigorously, as when a patient first enters the room, or is somewhat excited, and becoming fainter as the temporary excitement subsides.

Such are some of the chief peculiarities of the murmur. Then comes the question, "To what cause is the murmur due?" This is the most important part of the inquiry: and there is without doubt much difficulty about it; but the following remarks may probably help towards a satisfactory solution of the difficulty:—

1. Is the murmur simply anæmic? i.e., brought about by an impoverished state of the blood, and a corresponding weak state of the vessels. Dr. Kirkes does not think it is; for if it were so it would most probably be heard at the base of the heart, and along

the aorta, and in most of the main branches of the thoracic aorta; but, as observed, the subclavian murmur is usually independent of any cardiac or other murmur, and, moreover, it is commonly heard in one subclavian region and not in the other, a fact quite inconsistent with the supposition of an anæmic origin. Again, if it was purely anæmic, it ought to be heard in all cases of anæmia; and it ought not to occur in cases which are not anæmic; but neither of these results is found to happen: for it is rare to meet with the murmur in anæmic cases independent of tubercular deposit, while it is frequently heard in suspected phthisical patients before any marked signs of anæmia are developed. Again, too, if it were anæmic, it ought to be constant, or nearly so, like other arterial anæmic murmurs, whereas it is often most fugacious—fading, disappearing, and reappearing again and again even during the same examination.

2. This variableness in its intensity, and even in its existence, naturally suggests that the murmur is due to some cause which is not always in operation, but only exercises a temporary influence. Now, nothing is so likely to be of this nature as pressure; for we can readily understand that with the continual changes taking place in the respiratory and circulatory movements within the chest, arterial and other canals, with their contents, will be continually exposed to varying degrees of pressure. Some examination of this as the probable cause of the murmur is necessary.

It is perhaps scarcely requisite to call to mind that simple pressure on a given part of an artery is sufficient to cause a murmur, by accelerating the current at the part compressed, and thus increasing the force with which the particles of blood come into collision with those in the succeeding wide part of the canal. Dr. Latham pointed out this fact very clearly, showing that in children with yielding thoracic parietes it is easy to produce a murmur in the pulmonary artery by exercising a little extra pressure with the stethoscope at or about the second left intercostal space near the sternum; and Dr. Jenner has since confirmed this observation by several additional examples. It being well-determined, then, that artificial pressure on an artery, by narrowing its calibre at a given part, may give rise to a murmur, we can readily understand that a like result—namely, an arterial murmur—may ensue when a large arterial trunk is compressed by any solid material, such as cancerous or tubercular matter deposited in parts contiguous to it. In order to the production of such a murmur, it is not perhaps enough that the parts surrounding the artery, say the tissue of the lung, should be simply consolidated, but probably they must be so affected as actually to press upon and narrow the artery at some point; as, for example, when a deposit ensues in such a situation as to project above the general level, and this in the immediate proximity of an arterial trunk.

That arterial murmurs in different parts of the thorax may thus be the result of pressure exercised by a tubercular lung, is demonstrated by an example mentioned in Dr. Hope's great work "*On Diseases of the Heart*." "I had a patient," Dr. Hope says, "in the St. Marylebone Infirmary, in whom I, as well as the Apothe-

cary, Mr. Hutchinson, noticed a distinct murmur along the ascending aorta on some occasions, and not the slightest in others. I was much perplexed, and could not make up my mind as to the existence of valvular or aortic disease. The patient died of phthisis; and on post-mortem examination it was found that the anterior edge of the left lung, completely indurated by tubercular deposition, pressed so exactly on the ascending aorta as actually to have taken its mould, though without adhering. It was now recollected that the murmur had always been heard when she lay on her back or inclined to the right side, but not when inclined to the left; hence we ascribed it to pressure of the lung on the aorta when the position of the body caused it to gravitate towards the right side." (Third edition, p. 391). There can be little doubt that Dr. Hope's interpretation was correct; and it clearly suggests to us that tubercular and such like deposits in other parts may, when in close proximity to a larger artery, compress it, and so give rise to a murmur.

Dr. Kirkes inclines to believe that in the majority of cases in which this subclavian murmur occurs in incipient phthisis, it is due to unwonted pressure exerted on some large arterial trunk, diminishing its calibre at the compressed part. The cause of pressure is, no doubt, the tubercular matter deposited in the pulmonary tissue. But then the inquiry occurs, What artery is compressed? This, no doubt, will vary according to the seat of the tubercular deposit. If it occurs below the apex of the lung or near the situation of the pulmonary artery, this vessel may be the one compressed and the one which gives rise to the murmur, as so often noticed by Dr. Latham. The same artery, too, may be compressed and probably generate a murmur in cases where neighbouring bronchial glands are enlarged and filled with tubercular matter. But when the deposit occurs, as it usually does, in or closely adjacent to the very apex of the lung, the arterial trunk most likely to be compressed is the subclavian. This artery lies upon, and actually indents the apex of the lung for a distance of an inch and a half or two inches on the left side, rather less on the right. Now, when the apex of the lung is consolidated by tubercular deposit, we can readily understand that it will tend to exercise a greater degree of pressure on the subjacent artery than would healthy vesicular structure, and would therefore be likely to diminish the calibre of the vessel at that part, and thus give origin to a murmur. This supposition is strongly confirmed by the fact that the murmur is usually loudest at the end of full inspiration; for it is intelligible that when the vesicular structure of the neighbouring portion of lung is fully distended with air, the consolidated portion will exercise a greater amount of pressure on the adjacent parts than when the vesicular structure is comparatively empty. The subclavian artery, then, Dr. Kirkes suggests, is probably the usual source of the murmur so frequently heard when there is reason to suspect tubercular deposit in or about the apex of the lung; and when heard it may generally be held to indicate that the tubercular deposit is exercising pressure on the vessel. But although the subclavian artery is probably the most common seat of the murmur, yet the aorta, the innominate,

and the arteries are all in immediate proximity to the portions of lung thus usually the seat of tubercular deposit and may therefore be compressed in it and give rise to a murmur. There is, of course, another view which may be taken as to the cause of the murmur: viz. that it may be the result not of pressure on a vessel, but simply of impediment to the transit of blood through the consolidated pulmonary tissue, whether the pulmonary artery and its main branches become obstructed. But the latter cannot easily be understood in view of the fact that the murmur does not always precede the appearance of the tubercles, and may be absent when they are advanced to any but a very little distance in this condition.

With regard to the diagnostic value of the murmur, it may be added that although its existence may be regarded as a strong additional sign of tubercular deposit, yet its absence must by no means be held as negating the existence of such disease, for it is quite intelligible that even a considerable amount of deposit may exist without being so situated as to exercise sufficient pressure on any large artery to produce a murmur. Then, again, so far as the author has been able to determine, the murmur is an attendant on the *earliest* stage of phthisis—that, namely, of tubercular depositions; and on this fact its chief diagnostic value depends: for in the stage of softening the physical signs of the disease are too obvious to need any additional confirmation. The presence of the murmur in the *earliest* stage, and its absence in the stage of softening, are quite intelligible on the view that pressure by a consolidated lung is the cause of the sound; for it is in the first stage *especially* that this condition is likely to exist, the lung in the later stages being more or less softened, broken down, and hollowed into vomice. Moreover, in the later stages the total amount of blood is diminished from deficient nutrition, and the muscular power of the heart is also lessened, so that the blood is propelled with less force.

There is just one other point which may be mentioned: care should be taken when listening towards the humeral end of the clavicle not to press too hard on the subclavian artery in its course outside the chest, for in some cases Dr. Kirkes believes he has, by such pressure, induced a murmur which did not previously exist; and this is a caution which should be especially observed in thin and anæmic subjects.

ART. 59.—*On the Diagnosis of Hæmoptysis.*

By DR. HYDE SALTER, Assistant-Physician to the Charing Cross Hospital, &c.

(*Lancet*, August 2, 1862.)

"I find it," says Dr. Hyde Salter, "not at all an uncommon thing to meet with cases, both in hospital and private practice, in which I feel at first, and occasionally for some time, a doubt as to the source of hæmorrhage which is discharged from the mouth. A case of this character came under my observation a few days ago,

in which the turning point of the diagnosis was sufficiently interesting, and which it is my purpose in the present communication to narrate. I need not enlarge upon the primary and essential importance of an early and correct diagnosis of the seat of the hæmorrhage, in cases both of hæmoptysis and hæmatemesis."

CASE.—I was called, on Sunday, June 22nd, by my friend Mr. Guy of Dorset-square, to see with him, as soon as possible, a patient who was suffering from profuse hæmorrhage. On arriving at the patient's house, I heard from Mr. Guy the following account of his case:—

The patient, who was 68 years old, had been seized with blood-vomiting on the evening of the previous Thursday, and Mr. Guy had been hastily sent for to see him. The quantity of blood which was found to have been discharged was a washhand-basin three parts full. This Mr. Guy saw; it was free from froth. On the following day (Friday) the bleeding was much less; on the Saturday it returned profusely, and on the Sunday with such violence that I was hastily sent for. Mr. Guy had witnessed a great deal of the hæmorrhage himself, and distinctly ascertained that the blood welled up into the mouth apparently spontaneously, without effort, and without either vomiting or coughing. Gallic acid and other anti-hæmorrhagics had been given, and scraps of ice swallowed at intervals; but so little was the hæmorrhage controlled by these means that the patient was of opinion that the medicine rather provoked it.

On entering the patient's room, I found an old man sitting up in bed, pallid from loss of blood, and with a feeble voice. His breathing was slightly accelerated, and his speech short; but this seemed sufficiently explained by his exhaustion and by other circumstances, not bearing on the source of the hæmorrhage, which I will presently relate. His pulse was between 70 and 80, and except being a little compressible, was in every way natural. He told me he had no pain anywhere of any kind, and had had none. His history was as follows:—

He had always been a man of regular and temperate habits, and had enjoyed good health, except that for many winters past he had been liable to attacks of bronchitis; some of these had been very severe, and for the last few years he had had almost constantly a certain amount of cough and expectoration. Latterly, however, he had been better in these respects, and had been coughing and spitting less than usual; his friends, too, had been telling him how much better he was looking. On catechising him, I found that he had had no recent loss of flesh, no loss of power, no streaks of blood with the expectorated mucus, no night sweats; that he had no loss of appetite, no pain after eating, no vomiting, no epigastric tenderness; in fact that there was a clear absence of any signs or symptoms pointing either to hæmoptysis or hæmatemesis. I was shown about half a pint of semi-coagulated blood in a basin, and certainly this was free from froth. On close inquiry, it seemed that the blood was generally, if not always, discharged in the way Mr. Guy described, and without any true vomiting.

On examining the chest I found the breathing natural, and the lungs everywhere healthy, except at the posterior part of their bases. On the left side this region was the seat of crepitation; on the right, of no sound whatever; the respiratory murmur was quite lost; that part of the right lung was dumb. Percussion was fairly resonant everywhere; hyper-resonant nowhere. I should mention that the breathing at the apices, and over the whole of the front of the chest, was compensatory in its character. This completed the evidence submitted to me.

"Now I think it will be admitted that in this case the distinctive signs of the seat of the hæmorrhage were wanting, that the evidence altogether was of a negative character, and that no one could assert on the strength of it that the hæmorrhage was either hæmatemesis or hæmoptysis. This will, I think, appear the more clear if we just consider the distinctive signs of these two hæmorrhages; thus—

In hæmoptysis we have—

The blood frothy.
The blood mixed with sputum.
The discharge attended with coughing.
Evacuations not affected.
Pulmonary symptoms and history.

In hæmatemesis we have—

The blood not frothy.
The blood mixed with food.
The discharge affected by, or attended with, vomiting.
Evacuations often black.
Gastric symptoms and history.

"It might be conceived that the physical signs at the lower part of the lungs behind pointed to a pulmonary source of the hæmorrhage; but to my mind the antecedent history of chronic bronchitis deprived these signs of any significance. I felt that the crepitation at the posterior part of the base of the left lung might merely mark the present seat of the chronic bronchitis, and the dumbness of the corresponding region of the right side might depend on nothing more than partially collapsed, partially emphysematous lung, the seat of some of the old attacks.

"Thus I felt in the same doubt as my friend Mr. Guy, and was quite unable to pronounce positively as to the seat of the bleeding, when a circumstance occurred that to a certain extent supplied evidence of a positive nature. Just as I was going to leave, our patient was seized with a violent fit of coughing—the prolonged and fruitless coughing of a weak old man. After repeated efforts the material producing the cough was at length driven through the glottis, and spat from the mouth, when, behold! it was blood—a black clot, as big as a filbert, with one end distinctly frothy. This was the most conclusive evidence we had as yet obtained, and with this modicum of positive evidence I left our patient, after having suggested the frequent administration of small doses of turpentine and opium. I did not see him again until Tuesday morning. He had had a good day on the Monday, with no profuse hæmorrhage, and only the expectoration of clots. I repeated all my old inquiries, with the view of eliciting, if I could, any further information, until, on being told that all the clots expectorated were singularly alike, the idea occurred to me that a close inspection of them might possibly reveal the seat of their formation, and that they might perchance be found to be moulded in some one part of the air-passages. I inquired of the attendant of our patient if the clots appeared to be branched, or if he had shaken them out in water, and, being answered in the negative, I procured a basin of water, and shook out in it the last clot expectorated, and which I was informed was the counterpart of the rest. To my great satisfaction I saw it, as I shook it out, unfold into a tree of blood, a perfect cast of the bronchial tubes,

resembling, except in colour, the plastic bronchial casts so frequently seen.

"The whole thing was now cleared up, as far as the seat of the bleeding went; there could no longer be any doubt that the hæmorrhage was poured out into a principal bronchus, of which, and of the immediate ramifications of which, it formed the mould. And I was inclined to think that this bronchus was the left, for this special reason: on listening at the base of the left lung posteriorly, I found that the crepitation which I had heard so abundantly on my previous examination was quite gone. Now if this crepitation had been due to the patient's chronic bronchitis, as I at first thought it was, it could not have so quickly and so completely cleared away. If not due to the bronchitis it must have been due to the blood—to blood that had gravitated to the most dependent part of the lung from the seat of the bleeding; being, therefore, in the left lung, the bleeding must have been on the left side, and the size of the main trunk of the cast showed that it could not have been moulded in a tube of less calibre than the principal bronchus. I was induced thus to fix upon the exact spot, and say that the left bronchus was the seat of the hæmorrhage.

"Now, taking these data, what diagnosis could be built upon them? No other, I think, than that the bleeding was aneurismal; that the aneurism communicated by a small fissure—a fissure so small that the bleeding was intermittent—with the left bronchus; that it was, therefore, probably an aneurism of that part of the aorta beneath which the left bronchus passes—i. e., the convexity of the arch, or the commencement of the descending portion; lastly, that the aneurism was small, as it revealed itself by no physical signs—there was no pain, no dysphagia, no pulsation, no murmur, the pulse was alike in both wrists. There was one circumstance in the form of this clot that, as I interpret it, strongly pointed to an aneurismal origin of it. Close to the large extremity of the main trunk, two branches seemed to arise by a common stem; but on separating these branches it was found that they were adherent at their extremities; in fact, that they formed a ring. Now I cannot conceive how a coagulum of this form—an unramified ring—could be moulded in a bronchial tube. I think it must have been formed in the aneurism, and dragged thence when the clot was discharged; that it was, in fact, a portion of the coagulated blood in the aneurism; that the size of the ring probably marked the size of the aneurism, and that the pedicle by which it was attached occupied the orifice of communication between the aneurism and the bronchus. This may seem making extensive deductions from small premises, but I do not see how the annular form of this part of the clot can be otherwise explained.

"Such was and is my diagnosis of this case, and its subsequent history has but confirmed my opinion. I have not seen the patient now for a fortnight (for, having expressed to the relatives my opinion as to the hopeless nature of the case, they imagined I had arrived at the end of my tether in the way of treatment, and that some one else might be richer in resource, and so sent for that

some one else); but I have heard from Mr. Guy that the hæmorrhage still continues, that the patient is getting increasingly blanched by it, that casts are frequently expectorated, though not so perfect as the one I have drawn, and that there is still the same absence of symptoms, either of stomach or lung disease, and of signs of aneurism. The great point of interest about this case, and that which to me appears to make it worth recording, is the peculiar circumstance that rendered certain the previously doubtful seat of the hæmorrhage, and at once reversed the diagnosis which had in the first place been formed.

"In concluding, I cannot but remark that this case seems to me to confirm an opinion I have long entertained as to the nature of those cases of supposed plastic bronchitis in which hæmoptysis precedes or accompanies the discharge of the casts. I have always suspected that in these cases the fibrinous casts are the result of the hæmoptysis, and not the hæmoptysis the result of the detachment of the casts. It seems impossible to imagine how the discharge of a peculiar inspissated mucous exudation (and the ordinary bronchial casts are nothing more) can be a cause of hæmorrhage; while, on the other hand, the decolorization of coagulated blood occupying the bronchial tubes would furnish pale and ramified casts. Moreover, it seems difficult to imagine why the discharge of the casts should in some cases always be attended with profuse hæmorrhage, and in other cases with none, except on the supposition of an essential difference in the nature of the casts in the two cases. I remember some time ago being told by a physician, of a case in which the late Dr. Todd expressed an opinion that the hæmoptysis was due to the detachment of bronchial casts, which he predicted in a few days would appear. In a day or two, when the bleeding was pretty well over, they *did* appear, and Dr. Todd got no small *kudos* for his prophecy, which was thought little less than miraculous. My informant expressed the belief, and I quite concurred with him, that the casts spat up after the hæmorrhage were nothing but decolorized fibrin whose discharge had in some way or other been delayed."

ART. 60.—*On Pleuritic Effusions, viewed in relation to Thoracentesis.*

By Dr. HENRY THORP, of Letterkenny.

(*Dublin Quarterly Journal of Medical Science*, August 1, 1862.)

Dr. Thorp gives an account of two cases, in which he performed the operation successfully, and enters at some length into the history of paracentesis thoracis. Afterwards he proceeds to speak as follows:

"In short, I would apply to pyothorax, or pure empyema, the surgical principle, to which there are few exceptions in acute or sub-acute suppurations: that of discharging the abscess by a free opening. Here, however, it is necessary to inquire where the perforation should be made when the case admits of a point of election? and we may not act unwisely by interrogating the *vis medicatrix* on

this head. When spontaneous openings occur, are they not generally found anteriorly and high up? Nature then indicates these positions as being the most eligible by her own operations. Nor is the object of her method obscure or unintelligible. By causing the liquid contents to proceed from below upwards she guards against the sudden evacuation of a cavity (and consequent entrance and *imprisonment* of atmospheric air in proportionate volume), the walls of which can only approximate by slow degrees, thus the suppurating sac is emptied gradually by its own contraction; and the air, which can only enter in small quantity, has *free egress*, being *always uppermost*, and in close proximity with the discharging orifice. We should therefore, in conformity with these principles, not open the chest in a depending position; for if, unfortunately, afterwards, putrefactive changes take place, the septic gases floating above the other contents *have no exit*, are absorbed by the lining membrane of the cavity, excite inflammation of the latter, contaminate the blood, and produce typhoid symptoms. To prevent, then, putrid absorption and its concomitant evils, let the empyema be opened above—that is to say (when the case admits of our doing so), between the fourth and fifth ribs, anteriorly, and provide, if necessary, for the constant drainage of the abscess by the introduction of a Chassaignac's tube.

"In cases, however, of hydrothorax, or sero-albuminous, sero-sanguineous, and passive collections in the pleural sac, our operative proceedings should be guided by very different principles. In pyothorax a pyogenic membrane is already formed, and matter is making its way to the surface; by evacuating the collection we only complete an operation already commenced. But the other class of effusions referred to are very differently circumstanced; they are not included in an adventitious sac, or newly organized membrane, but lie in contact with the serous surface in a healthy condition, or only slightly altered in anatomical structure and vital endowments; the fluid evinces no tendency to reach the surface; if it disappear, it is directly absorbed from the serous cavity, and is never evacuated externally without having previously undergone more or less of purulent metamorphosis. Therefore we should endeavour, in dealing with these immature collections, to avoid all causes of irritation, and to prevent, by all means in our power, the higher or suppurative grade of action not yet attained under existing conditions; in short, we should make the practice of art approach as closely as possible to Nature's own operations, and not proceed in untimely advance of them. Accordingly, the fluid ought, only in the first instance, to be partially withdrawn; the remainder may be absorbed into the system; if not, the tapping may be repeated. Valvular perforation of the integuments and the employment of a vulcanized india-rubber bag and stopcock, or the ingenious trocar and canula invented by Mr. Charles R. Thompson, will effectually prevent the entrance of atmospheric air.

"By proceeding in this manner we do not overstrain the vital processes of the economy in their progress towards the restoration of health, but only disencumber them of impediments that check

their free action, and, with full confidence in her resources, leave Nature to complete the cure by the continuance of her own efforts.

"We first endeavour to comprehend the purposes and *modus operandi* of the *vis medicatrix*, and then follow faithfully in her path, without seeking, by premature interference, to reverse the natural order of pathological events, or force upon her contingencies for which she is as yet unprepared."

ART. 61.—*Sudden Death in the course of Chronic Pleurisy.*

By M. BLACHEZ.

(*L'Union Médicale*, 14, 1862.)

Cases of this accident have been reported by MM. Chomel, Cruveilhier, Thibierge, Grisoile, and Aran: and a new instance is reported by M. Blachez. The patient was a man, aged 40: early in September he was attacked with pleurisy of the left side, which had lasted four weeks when he came under notice; at this time dulness on percussion extended up to the clavicle, but was not intense in character. Embarrassment of breathing very slight, heart not dislocated. On the 8th of October, three hours after dinner, the patient sprang suddenly out of bed, with signs of the greatest anxiety. He complained of some epigastric pains and intense dyspnoea; his countenance was changed and covered with cold sweat; pulse feeble, rapid, and irregular. Respiration on right side loud and jerking, on left side rather weaker. Death occurred in ten minutes from the seizure. Post-mortem examination showed old pleuritic adhesions of the right lung, which was reduced to half its normal size; and about two pints of serous effusion in the left pleura. The heart had its usual position and size: in the right ventricle was discovered a clot, of the thickness of a goose quill, which did not adhere to the walls, but extended into the pulmonary artery to its bifurcation, reaching both into the right and left branches, though furthest in the latter; the inner coat of the artery everywhere intact. The only other appearance of note was a slight superficial softening of the cortical substance of the brain, just where it rests on the lamina perforata of the æthmoid. Dr. Blachez considers that death was due to the obstruction of the pulmonary artery.

ART. 62.—*Case of Asthma produced by Pressure on the Superior Vena Cava.*

By M. PIORRY.

(*Gazette des Hôpitaux*, and *Edinburgh Medical Journal*, May, 1862.)

CASE.—A woman, 45 years of age, of moderately robust constitution, was admitted into the Hospital La Charité on the 2nd February, 1862. The principal symptom which she presented was a considerable difficulty in respiration, manifested by the frequent elevation of the ribs. The face was of a violet hue, and had a general expression of suffering. When asked to point out the spot where she felt pain, she referred to the cardiac

region. The first point which attracted the attention of the physician was a considerable dilatation of the venous branches, which, starting from the subcutaneous thoracic region, proceeded towards the left and even the right subclavian. The jugular veins externally (anterior, and internal) and the veins of the head were also distended, and did not diminish in volume, after repeated expirations, any more than they increased in size when the patient diminished considerably the rapidity of her respiration—a circumstance which, according to Professor Piorry, proved that the obstacle to the flow of blood was situated in the circulating organs, and not in the lungs. Application of the hand to the thoracic parietes caused no pain, but a purring thrill was perceptible. The extent of the cardiac dulness, as determined by the pleximeter, and traced with a pencil, was 5.6 inches from side to side. The form of the organ was regular. Above the heart and aorta, and a little to the left, was a very dull space of an oval form, measuring 2.8 inches from above downwards, and 2 inches from side to side. The arch of the aorta was not dilated. Under the influence of repeated deepened expirations, the heart became somewhat diminished in size, whilst the size of the tumour did not alter. No abnormal sound of any kind was heard in the cardiac region. The liver was of the normal size; it diminished somewhat when the respirations were accelerated. Percussion showed that the thyroid gland was increased in size, and that inferiorly it was continuous with the tumour. Questions addressed to the patient, and a critical examination of her symptoms, led to the following result: The patient came from Dijon; she knew many persons in that locality who were the subjects of goitre; she herself had suffered from it in her infancy. Her health was good till three months before admission. Her symptoms increased slowly, but incessantly; and her chief source of suffering was difficulty of breathing. Professor Piorry's diagnosis was, *Asthma, caused by the pressure of an intrathoracic tumour upon the superior vena cava*. Was the tumour an aneurism, or a tuberculous or cancerous mass? or was it a tumour of the thyroid gland? Whatever it was, it compressed the vena cava superior; and hence the dilatation of the veins, the stasis of the blood, the difficulty in breathing, &c. Professor Piorry, however, had several times seen the thyroid body extend beyond the mediastinum, so as to compress the aorta and vena cava. The patient died three days after her admission to the hospital; and the diagnosis of M. Piorry was verified by the results of the post-mortem examination. The superior vena cava was compressed by a tumour consisting of the hypertrophied and cancerous thyroid gland.

ART. 63.—*On the Supposed Therapeutical Action of the Excreta of Serpents in Certain Chest Affections.*

By Dr. R. P. COTTON, Physician to the Hospital for Consumption at Brompton, &c.

(*British Medical Journal*, May 17, 1862.)

Dr. Cotton has put Dr. Hastings' notions upon this subject to the test of experience in eighteen cases—fourteen phthisical and four bronchial. Eight grains of the excreta of the python were dissolved in sixteen ounces of water by the agency of three drachms of liquor potassæ. From this solution, the lithate of ammonia was partly or wholly precipitated by the addition of ten drops of strong sulphuric acid. This mixture, when filtered, constituted a lotion which was

to be rubbed all over the chest two or three times a day ; whilst one drachm of the same solution, diluted with six ounces of water, formed a mixture for internal administration, half an ounce of it being given two or three times daily. Both the lotion and mixture were clear, colourless, and almost if not quite tasteless, and were compared by many of the patients (who were entirely ignorant of their composition) to rain water. Of the consumptive patients, eight were in the first, two in the second, and four in the third stage of the disease. The four cases of bronchitis were of a chronic kind ; three of them being associated with more or less emphysema. Of the patients generally, several had but just been admitted into the hospital ; whilst others had already been under treatment, some of them more or less successfully ; so that the new *remedy* was administered under every possible variety of circumstances.

A careful examination of the result is singular and interesting, not so much in reference to the question under consideration, as with respect to other matters medical. Dr. Cotton first notices the effect of the excreta.

Without reference to particular cases, in twelve no effect whatever was produced ; no single symptom relieved ; and the excreta solution appeared to be perfectly inoperative either for good or harm. So innocent was it of any effect, that of these twelve patients, five who had previously been deriving more or less benefit under other treatment, begged that it might be exchanged for their former remedies. In six cases (Nos. 2, 7, 12, 15, 17, 18), either the lotion or the mixture was reported by the patients to have done good ; three of these found relief only from the *lotion* ; but the remaining three thought the *mixture* was more or less beneficial. The three (Nos. 2, 7, 16) who derived benefit from the lotion *found no difference in the result when the excreta solution was exchanged for plain water* ; and of the three who spoke in praise of the mixture (Nos. 12, 15, 18) two *experienced no difference, but went on just as favourably when the same change was made in the mixture* ; and the third (No. 15) was equally influenced when he unsuspectingly took *weak lime water instead of the excreta*.

With such facts before us, it is impossible to arrive at any other conclusion than that *the excreta of serpents, in the treatment of phthisis, bronchitis, and emphysema, is a perfectly inert substance*.

It would be wrong, however, to dismiss this subject without some remarks upon the six improved cases, since they teach us an important lesson. To what can we attribute the supposed success either of the lotion or mixture ? Friction, doubtless, had a great share in the benefit resulting from the lotion ; whilst in both, hopefulness, rest, good living, and hospital hygiene were unquestionably the great agents. Perhaps, most of us are disposed to attribute too much to the action of physic, and too little to the circumstances with which it may be associated. It is so easy to forget that there are no better tonics than confidence and hope, and no physic more effective than good air and proper nourishment.

Sir Benjamin Brodie, in his well-known anti-homœopathy letter, has very justly remarked, that "if any one gave to his patients nothing

but distilled water, and enjoined a careful diet and a prudent mode of life, although a great number would perish for want of further help, more would recover." It would seem, indeed, often to matter little whether we go back to earlier days, and give our patients an *infusion of pearls*, or let them use *metallic tractors*, or indulge them with *homœopathic globules of serpents' excrement*; the remedy needs only to be *harmless*, and a certain number of them will recover. It is only necessary to look upon this "certain number" as the *rule*, and, at the same time, either to disregard or overlook the real element in their recovery, in order to believe that in any inert substance—it matters not what it is, so that it be only inert or something approaching it—we have found a great remedy.

ART. 64.—*Case of Hydatids of the Liver evacuated through the Lungs.*

By Mr. W. HANBURY, Surgeon, 33rd (Duke of Wellington's) Regiment.

(*Transactions of the Medical and Physiological Society of Bombay*, No. 8, 1861.)

Dr. Watson, in the third edition of his *Lectures on the Practice of Physic*, vol. ii., pages 538 and 539, relates the history of a case of hydatids of the liver, which were discharged by the lungs and bowels; and so full of interest does he consider the case, that he concludes his account of it with the remark, that it "deserved to be recorded in more complete detail."

That hydatid cysts are seen most generally in the liver is of course well known, as also the fact that they sometimes lead to the formation of abscess, and are thus discharged through the walls of the abdomen. Mr. Hanbury has not yet, however, during his experience of ten years among British troops in India, met with more than one instance in which these cysts were evacuated by the lungs, and this instance forms almost an exact parallel to that recorded by Dr. Watson.

CASE.—G. G. proceeded to Aboo with his company on duty in October, 1860. On the 9th May, 1861, was attacked with what were considered symptoms of colic, but subsequently admitted under the head of hepatitis. On return to Deesa from the hills early in June, a report was received from the medical officer in charge of the Sanitarium at Mount Aboo, stating that he was "admitted with colic caused by the passing of gall-stones, and constipated bowels, pain occurring at intervals in the epigastrium extending to the right hypochondrium and the back, which terminated in inflammation of the liver." After his arrival on the 14th June at Deesa he was detained three weeks in the regimental hospital, during which period he suffered from paroxysms of pain for several hours on different occasions, was pale, weak, and emaciated, affected with irregular bowels and bleeding hæmorrhoids, but examination of the dejections, frequently repeated, failed to detect gall-stones.

On the 3rd of July he was discharged from hospital and placed on the

convalescent list, but on the 14th of the same month was again admitted, as he did not appear to regain strength. From this time he continued under treatment till the 13th of the following month, complaining frequently of pain in the right side of a severe writhing character, and lasting for a few hours; short and embarrassed breathing, fatigue on slight exertion, diarrhoea, &c.; but on the evening of that day he called my attention to some fluid which he had expectorated during the day, and on examination, five or six broken cysts were observed, from which the fluid was derived, and which it seemed more than probable were detached from the liver and evacuated through the lungs.

The Report continues—

August 15th.—Has expectorated more of the fluid matter with a few cysts, the latter like grape or gooseberry skins, and tinged with bile. No additional constitutional derangement.

August 16th. *Vespere*.—This evening expectorated rapidly about a quart of fluid, floating innumerable cysts, more or less tinged with bile, from which this fluid matter had escaped. A few of these hydatids (though none of the larger ones) were found unbroken, about the size of a small grape, and filled with a liquid of an opaque colour somewhat resembling that occasionally seen in an addled egg, though not so dark, and of less consistence. In the efforts to evacuate these cysts he was much prostrated, and I found him sitting up, breathing with distress, and covered with profuse perspiration. On examining the chest, rhonchi were heard over the base of right lung posteriorly, while over the left respiratory sounds presented nothing abnormal. About an ounce of dark, grumous, purulent-like discharge, derived from the right lung, was expectorated with the contents of the hydatid cysts. Wine was now administered to the extent of a few ounces, and a bandage was applied to support the abdomen.

August 17th.—During the night expectorated more than a pint of the same sort of fluid, though containing fewer cyst walls, but a much larger admixture of bile, which renders the matter of a green colour; has recovered from the exhaustion of last evening. The pulse is now of some volume, and he expects to be able to eat something for breakfast.

August 18th.—Improvement is noticed, and he is able to sit up; has expectorated about a pint of thin bilious fluid, without cysts and free from purulency.

Vespere.—Progresses favourably, and got off during the day about half a pint of dark-green bilious-looking fluid.

August 19th.—Little change is observed in general appearance, but he is yet weak and much reduced. Expectorated since yesterday about 4 ounces of tenacious mucus sputa with some degree of purulency.

August 20th.—Continues in the same state generally, and has expectorated about 5 ounces of muco-purulent fluid of a bitter taste.

August 21st.—Last evening the sputum was still muco-purulent and tenacious, but during the night this ceased to be coughed up, and he expectorated in its place about a pint or more of dark-green bile; pulse is soft and equable, and skin moist, spirits good, and appetite moderate. Yesterday auscultation elicited posteriorly a strong tubular sound in the act of coughing. From this date the improvement was steady and progressive, and the reports henceforward were less frequent.

August 23rd.—Expectoration continues copious; a tenacious mucus with slight trace of pus; once since last report half a pint of bilious-looking bitter fluid was coughed up; pulse is soft, and strength holds up.

August 29th.—General health has steadily improved, and his appetite is tolerably good, while there is no febrile excitement; has expectorated from

half a pint to one pint daily of mucus with slight admixture of pus and a tinge of bile, and occasionally thin fluid bile.

September 6th.—No new features have been presented; health improves, and expectoration is somewhat less, and quite free from purulency, but still contains bile in more or less quantity; this is so bitter that violent coughing comes on, and breathing is almost suspended when a little of it finds its way into the œsophagus, while it is speedily ejected thence by vomiting.

September 14th.—Continues to improve, but he still expectorates a tenacious mucus mixed with bile, to the extent of half a pint daily.

September 20th.—Expectoration decreases daily in amount, and now seldom contains a trace of bile; has gained seven pounds in weight since the 7th of the month.

September 27th.—No new symptoms are presented. He gains both weight and strength, but still expectorates mucus, which is occasionally tinged with bile.

ART. 65.—*Empyema from the Escape of Hydatids of the Liver into the Pleura.*

By Dr. GULL, Physician to Guy's Hospital, &c.

(*Lancet*, August 30, 1862.)

CASE.—James E., aged 36, a labourer, was admitted into Guy's Hospital, under the care of Dr. Gull, on the 28th of May, 1862. Had been ill eight weeks, his health previously having been very good. He first had pain in the right hypochondrium, and a feeling of tightness over the epigastrium, both of which he had for some time previously to leaving off work, which he did eight weeks ago. A week afterwards he had pain in the loin extending to the hip. The pain is always worse when he lies down. Has had bilious attacks during the last five years; his complexion is a sallow florid. He has constant pain in the right side, worse on lying down. There is a tightness and fulness of the belly in the right and left hypochondrium and in the epigastric and umbilical regions. No jaundice.

June 6th.—Pain is less. In the abdomen can be felt a tumour, which appears to have three divisions, each one being round and expanded, and seeming to fill the hand when placed over it. He has become thinner and weaker since he has been in the hospital.

13th.—A small trocar and canula were passed into the tumour on the right side, on a level with the cartilage of the tenth rib, two inches from the median line. About three ounces of a greenish pink purulent matter were drawn off; the pus had little or no odour. The canula was left in with its orifice externally plugged. The pain in the side was relieved. The next day the pus was found to contain hooklets of the echinococcus, hepatic cells, and broken-up pus cells. Pus was discharged, on and off, up to the 19th, when a No. 1 catheter was substituted for the canula; and by the 21st each division of the tumour was smaller and softer. The catheter was removed on the 22nd, and the opening enlarged. He had no pain now on coughing.

28th.—The total amount of pus that has come away since the cyst was tapped is twenty ounces.

The discharge continued to flow in varying quantities, without impairment to health. On the 6th of July it was fifteen ounces. His back at this time was rather sore from lying; and on this account, on the 9th, he was placed on a spring bed. Next day he was found to have suffered consider-

able pain all the previous night, and was very fretful: pulse 100; tongue clean. On the 14th, half a pint of discharge was lost during the night; he was restless and in great pain. He did not waste so much as might have been expected. On the 16th thirty-eight ounces, on the 17th forty-four ounces, and on the 18th twenty-four ounces of discharge were drawn off. On the 24th four ounces of fluid were drawn off, much more liquid than usual. Pulse 115. He died on the 5th of August, worn out and exhausted.

Autopsy, twenty-eight hours after death.—Body was spare, with a tumour in the region of the liver and its neighbourhood. The left lung and pleura were healthy. The right pleura was full of pus, of a sickly smell, which pressed back the lung in an almost airless state against the spinal region; the pleura itself was in a state of inflammation, of apparently some weeks' standing. The base of the lung adhered to the diaphragm, so that the angle of the lung was over the middle part of the diaphragm, and here the latter was perforated by several ragged openings, which led through to the abscess in the liver. These openings communicated upwards with the cavity of the pleura and with the lung-tissue. When air was forced into the trachea, it escaped through the lung-tissue and diaphragm into the hepatic abscess. The heart was normal, excepting a small patch of recent lymph over the right ventricle. The stomach was displaced downwards and to the left by a tumour of the liver. The right lobe of the liver formed a dense thin-walled bag, holding about three quarts, and lined inside by the gelatinous wall of an hydatid cyst; the right lobe presented no liver-tissue; the Spigelian lobe was not hypertrophied, but the left lobe was remarkably, even enormously so; its weight was three pounds fifteen ounces when removed from the remnants of the right lobe. The tissue of this left lobe was of coarse appearance, the lobules being individually much larger than usual; the remnants of another hydatid were lodged in a notch in the margin of the left lobe in the form of a folded gelatinous cyst, with cretaceous material within and without it. The immense cavity in the right lobe was full of pus, of sickly odour, and was in communication with the empyema through the perforated diaphragm.

ART. 66.—*On Uncomplicated Hoarseness and the Sudden Hoarseness of Singers.*

By M. JACCOUD.

(*Journal of Practical Medicine and Surgery, and Medical Circular,*
May 14, 1862.)

The second volume of *Graves' Clinical Lectures* contains remarks of much interest on the subject of hoarseness, and their importance is further enhanced by annotations from the pen of the translator, M. Jaccoud.

Young people of both sexes, says Graves, are frequently affected with a kind of chronic hoarseness which often resists most obstinately all remedial measures. A child, in consequence of exposure to cold, suffers from sore throat and feverishness, which yield in a few days spontaneously, or to the exhibition of mild laxatives; but the roughness of the voice persists, and lasts for weeks and months without any other concomitant symptom, or any perceptible organic alteration. This condition is the result of insidious irritation, and depends on the relaxation of the chordæ vocales, and perhaps even of the

muscular structures of the larynx, and can neither be removed by dietetic precautions, nor by any form of antiphlogistic treatment. Rubefacients applied to the skin, and gargles of a stimulating character, are the remedies which will be found most beneficial. Graves was in the habit of prescribing at first the following liquid as a gargle, to be used five or six times a-day :

R Tinct. capsici, ℥j ;
Decoct. cinchonæ, ℥iv. M.

He gradually increased the dose of capsicum to three drachms, an amount which he never exceeded.* Embrocations were made at the same time on the anterior part of the neck with

R Liniment. camphoræ, ℥vj ;
Ol. tigllii, ℥ij. M.

A tea-spoonful of the mixture was poured into a saucer, and rubbed in morning and evening, until a confluent eruption of pustules was induced. When these faded, the operation was repeated, and thus a slight but efficacious counter-irritation was perseveringly kept up. In addition to these remedies, absolute silence was enforced, and if a cure was not thus effected, Graves expressly recommended small doses of iodine, and change of air ; as a last resource, he advised mercurial fumigations, continued until the mouth was slightly touched, a remedy which almost invariably succeeded in removing the hoarseness.

The translator of Graves' lectures describes in a note certain sudden changes of the voice, which are not noticed in didactic works, and which he has observed in professional singers, particularly in spring and autumn. These vocal disturbances, says M. Jaccoud, are of two kinds, and have nothing in common but the suddenness of their invasion. They are sometimes the result of sudden congestion of the larynx and fauces, or are consequent on some nervous affection of the throat, or perhaps merely on fatigue of the tensor muscles of the glottis.

In the first case, the subject becomes hoarse, not only in singing but in speaking, and the sound of his voice has the peculiar roughness characteristic of the incipient stage of laryngitis. All the notes, high or low, are equally altered, and the patient complains of an uncomfortable sensation in the throat. The accidental cause of this variety is a sudden change of temperature from heat to cold or the converse, and it sometimes arises merely from the effects of a too highly-heated atmosphere. This, however, is but a determining cause ; for although singers are all more or less exposed to its operation, yet all are not subject in the same degree to the ailment. A predisposition here obviously exists, and would consist, according to M. Jaccoud, in a morbid hypertrophy of the glandular structures of the pharynx. This author has further remarked an habitual state of relaxation of the guttural mucous membrane in persons thus affected. These various morbid changes have suggested to M. Jaccoud a mode of treatment somewhat similar to that resorted to by

* The Dublin tincture is more than twice as strong as the London preparation.

Fourreau de Beauregard in the case of the Emperor Napoleon I., and by Bennati.*

M. Jaccoud prescribes a mixture consisting of

R Mist. acaciæ, ℥iv ;
Liq. ammon. acetatis, ℥j.

To be taken, in table-spoonfuls, every half-hour.

Also the following gargle :—

R Aquæ, ℥viij ;
Aluminis, ℥iiss ;
Syr. papaveris, ℥ij.

“On several occasions,” says M. Jaccoud, “I have thus succeeded in effecting a cure of hoarseness in three or four hours, and enabled my patients to sing on the very same evening. In urgent cases, when an artist suddenly loses his voice a few minutes before going on the stage, I am acquainted but with one remedy likely to give relief—it is the application of large mustard-poultices to the throat and chest. This method sometimes removes at once the vascular congestion of the larynx.”

M. Jaccoud then turns to the second kind of hoarseness, which interferes with singing only, and which utterly suppresses all notes above the middle of the diatonic scale. No morbid change can here be detected in the fauces, the vocal disturbance being merely consequent on defective adaptation of the ligaments of the glottis, which have lost the power of acquiring the tension necessary for the utterance of the higher notes. This condition, whatever be its cause, resists all therapeutic appliances, and entire rest of the organs, for three or four days, is absolutely necessary for its removal.

ART. 67.—*On a Percussion Thimble.*

By Dr. RADCLIFFE, Physician to the Westminster Hospital, &c.

(*Medical Times and Gazette*, May 31, 1862.)

In percussing with the fingers, a particular conformation of the hands is very desirable. The fingers must bend backwards with sufficient readiness, for without this it will be difficult to apply them to the part percussed in the proper manner; the ends of the fingers

* F. de Beauregard's mixture which restored the voice of Napoleon I., and enabled him to reply to the address of the inhabitants of Lyons on his return from Elba, is as follows :—

R Liq. ammoniæ, ℥x ;
Syr. erysimi, ℥xij ;
Infusi tilii, ℥ij. M.
To be taken in one draught.

Bennati's gargle consisted of

R Aluminis, ℥j ;
Decoct. hordei, ℥x ;
Syr. papaveris, ℥v.

The quantity of alum was sometimes increased to ℥v.

must not be too tapering, or the nails too projecting; the wrist must not be too stiff; the hand must not be too light; and so on. Nay, persons who experience none of these difficulties have come to the conclusion that the sounds elicited by the fingers are by no means so satisfactory as those which may be produced by the hammer of Dr. Winterich and the pleximeter of M. Piorry, or by some other of the many contrivances which have been invented for a similar purpose. And, certainly, he must be hard to please who is not satisfied with the results which may be produced by the instruments which have been named. Still there is this objection—that the pleximeter and hammer are not always at hand when they are wanted. The pleximeter is small, and may easily be put into the trowsers' pocket; not so the hammer. This objection, however, is not final. Why, indeed, should not the finger take the place of the handle of the hammer? Why should not the head of the hammer be hollowed out and put upon the head of the finger as a thimble? I could see no reason to the contrary; and Messrs. Savigny and Co., the well-known surgical instrument-makers of St. James's-street, London, have given me the opportunity of proving that there is no reason. Indeed, for some months past, I have been in the daily habit of using, particularly in clinical teaching, the *percussion-thimble* to which I now direct attention, and of which the accompanying cut will serve to give an idea. I put this instrument in my trowsers' pocket, along with the pleximeter; and once there, there is nothing in its size or weight to remind me of its presence. I find it at hand whenever I want it. I think I can produce with it sounds which are every whit as satisfactory as those which are produced by the hammer of Dr. Winterich, or by any other hammer: and my friend and late colleague, Dr. Hamilton Roe, the Senior Physician of the Hospital for Consumption and Diseases of the Chest at Brompton, is of the same opinion.



(c) CONCERNING THE CIRCULATORY SYSTEM.

ART. 68.—*On the Pathology of Angina Pectoris.*

By M. —.

(*Journal of Practical Medicine and Surgery, and Medical Circular*,
September 10, 1862.)

The pathology of *Asystolia* perfectly explains the mechanism of *angina pectoris*, and shows the connexion between the two morbid conditions.

Many eminent writers, among whom we may quote Baumes, Laennec, Desportes, and Lartigue, view *angina pectoris* in the light of a neuralgia, expressing at the same time conflicting opinions with regard to the particular nerves which are the seat of pain and the cause of dyspnoea. M. Beau conceives that the neuralgia originates

in the nervous system of the heart, and is inseparable from extreme and intermittent weakness of that viscus, which may be the cause or the effect of the neuralgia, but is, under all circumstances, the leading symptom of the disease, and imparts to it its well-known gravity.

Angina pectoris is not invariably accompanied by the train of symptoms enumerated by authors. Those who do not admit that it can exist without these attendant morbid phenomena, describe it as of very unfrequent occurrence, and M. Beau acknowledges that he has met with it three or four times only with all its characteristic signs. But pneumonia does not always show itself attended with the full series of its standard symptoms, and angina pectoris may also be deficient in certain manifestations represented as pathognomonic, but which, in fact, are of merely secondary importance. Thus palpitations and the propagation of the neuralgic pain to the left arm are not characteristic, but accessory symptoms. The pain may occupy the left arm or the right; it may be situated in both, or in the shoulders, and sometimes is altogether absent; and the paroxysm may occur, although the patient has not walked up an ascending surface. The fit may supervene under the influence of any movement or effort, or break out in the middle of the night, and cause cessation of life at its very first appearance. Thus the late M. Rilliet, of Geneva, was suddenly seized with angina pectoris while bending over a child in order to examine its chest, and although this was his first attack, he expired in a few minutes after complaining of excruciating pains between the shoulders.

According to M. Beau, the pathognomonic symptoms of angina pectoris are a more or less violent oppression in the region of the heart; a change in the countenance expressive of terror; and an uneven, quick pulse, indicative of imperfect propulsion of the blood into the arteries. Now these signs obviously point to a diseased condition of the heart, and M. Beau suggests that the affection, consisting in a functional disturbance of that viscus, should in future bear the more appropriate appellation of *Angina Cordis*. Whether the affection originates in some anatomical change in the central organ of circulation, or does not coincide with any lesion appreciable to the anatomist, angina always mainly consists in *asystolia*, an arrest of the action of the heart, or, if the term used by Biéra, Shaffer, and Jahn be preferred, in an incomplete paralysis of the organ. This form of *asystolia* may, however, be distinguished from the *transitory fits of suffocation* frequently observed in persons labouring under organic disease of the heart, with some degree of permanent dyspnoea, by the characteristic combination of symptoms at once momentous and intermittent.

The above remarks will assist in discriminating angina pectoris from asthma, from gastric dyspnoea, and from the neuralgic pains occasionally met with in the left arm, and in the superior intercostal nerves on the same side in cases of tuberculosis. These pains have recently been pointed out by M. Beau in several of his patients, and in the case of the late M. Miquel, a distinguished contributor to medical periodicals and literature, were mistaken for angina pectoris. This disease bears a greater resemblance to the symptoms induced

by the formation of coagula within the heart, but an error would here be unimportant, as in both instances the symptoms arise from the diminished energy of the contraction of the organ.

The principal causes of angina pectoris are a fatty condition of the heart, arterial ossification, rheumatism, gout, and syphilis. M. Beau also conceives that mental impressions may have considerable influence in producing the disease, and in bringing on its paroxysms. Dyspepsia, the excessive use of tobacco, which we have before alluded to, and which, as M. Bernard has shown, may in the long run occasion genuine paralysis of the heart, must also be numbered among its causes.

The points of resemblance above indicated between asystolia and angina pectoris suggest the treatment most appropriate to the latter. Digitalis should be prescribed in order to invigorate and regulate the action of the heart, and the causes which have a tendency to decrease its energy must as far as possible be counteracted. When, for instance, a patient liable to painful attacks of dyspnoea and feebleness of ventricular contraction smokes to excess, the habit must be abandoned. Tobacco alone is not the cause of angina pectoris, and Seneca, to whom we are indebted for so graphic a description of the complaint, was doubtless no smoker. But tobacco, either by the direct action of nicotine on the heart, or by its indirect operation on the system, as a cause of dyspepsia and of subsequent loss of appetite, obviously exercises an injurious influence, which it would be injudicious to neglect in any person otherwise predisposed to the complaint under consideration.

ART. 69.—*On the Influence of Tobacco-smoke in the Production of Angina Pectoris.*

By M. BEAU.

(*Journal of Practical Medicine and Surgery, and Medical Circular, August 27, 1862.*)

The facts on which M. Beau is led to believe that tobacco-smoke may be fairly blamed with being a cause of angina pectoris are these:—

CASE I.—A gentleman, aged about sixty, in the habit of smoking to excess, frequently suffered at night for a month from palpitation of the heart, oppression, and pain in the shoulders. He discontinued smoking, and the attacks entirely ceased, the digestive functions becoming at the same time more regular. After three months, he resumed his old habits, and again experienced the same symptoms. At last he completely eschewed tobacco, and no further return of the attacks has since taken place.

CASE II.—A physician, aged fifty, who, although presenting the outward signs of health, was troubled with dyspepsia, and consequent debility, indulged in the use of *cigarettes* whenever the opportunity offered. For some time, he complained of palpitations accompanied by oppression and a sense of tightness about the chest, recurring in paroxysms at various hours of the day or night. He gave up smoking, and the attacks ceased. One day he found himself in the same room with several smokers, and, although he did not yield to temptation, he inhaled the fumes of tobacco, and on the following night the former symptoms returned.

CASE III.—A physician, aged thirty-five, who practises in the country, incessantly smoked cigarettes in the intervals of his professional visits. For a long time his appetite had declined, and he consequently took very little food. One morning, while fasting, and smoking a cigarette on his way to one of his patients, he was suddenly seized with precordial anxiety, and tightness across the upper part of the chest. He was unable to speak or walk; his pulse became insensible, and his hands cold. These symptoms lasted half an hour. He came to Paris, and by M. Beau's advice relinquished the habit of smoking, promising to write if a paroxysm of the same nature as the first again appeared. M. Beau has not heard from him since.

CASE IV.—A young Spaniard, aged thirty, in the constant habit of smoking cigarettes, suffered much from dyspepsia and impaired digestion. One evening, while indulging in his customary relaxation, he suddenly experienced violent constriction of the chest, and for ten minutes his pulse was imperceptible. Alarmed at this occurrence, he greatly diminished his daily consumption of tobacco, and the symptoms of angina have not since returned.

CASE V.—A physician who has been compelled to discontinue the practice of smoking on account of disturbance of the gastric functions, also experienced, when he was in the habit of using tobacco, nocturnal attacks of tightness of the throat, with palpitation and neuralgic pains in the neck. He now enjoys perfect freedom from these symptoms.

CASE VI.—A merchant, who for fifteen or twenty years had suffered from dyspepsia consequent on immoderate smoking of cigarettes, suffers, chiefly at night, from paroxysms of precordial oppression, with palpitation and pain between the shoulders. The features are drawn, and the pulse small and irregular. This gentleman now smokes more than ever.

CASE VII.—A healthy and vigorous old man, aged seventy-five, seeks consolation in smoking from mental distress. On a Saturday an attack of angina supervenes, of half an hour's duration; a second fit recurs next day, and he is found dead in his bed on the Monday morning.

CASE VIII.—A foreign diplomatic agent, an inveterate smoker, who, despite appearances, was of a weak constitution, was seized one evening, on his return home, with angina pectoris, characterized by dyspnoea, smallness of the pulse, refrigeration of the extremities, and lividity of the integument. He went to sleep at eleven o'clock, awoke next morning at his customary hour, and transacted business as usual. At five o'clock, while smoking a cigar in his arm-chair, he suddenly expired. A fatty condition of the heart was the only alteration detected at the post-mortem examination.

ART. 70.—*Capillary Embolia from Fluid Fat a Cause of Pyæmia.*

By Dr. E. WAGNER.

(*Archiven der Heilk.*, III. 241; *Schmidt*, No. 7, 1862.)

Wagner establishes, by the publication of six cases, the fact that in some instances pyæmia is a direct morphological dyscrasia. The morphological changes consist in an embolia of the finest capillaries with fluid fat, which most probably passes from the primary deposit of pus (then undergoing the changes preparatory for resorption) into the general blood mass. For the most part it is arrested by the lung-capillaries, but in part it passes through these into the syste-

mic circulation, and it thus produces embolias of the capillaries of both circulating systems, and, as a result of these, metastatic abscesses. The microscopic appearances were most characteristic in the lungs. Not only in the abscesses themselves, but also in the parts pervious to air, there was found fluid-fat; and in the neighbourhood of the abscesses fat was deposited in cylindrical or knotty, straight or curved, masses; sometimes these were even bifurcated, and the smallest of them formed a network which appeared like capillaries, only twice the diameter, and tortuous in direction, so that the interspaces were reduced to as small a size as that of a blood-corpuscle, or even to half of this. Moreover, drops of fluid-fat were observed on the borders of the alveoli, which drops were situated in the capillaries of the alveoli. The fat-containing vessels were most easily perceived in the non-infiltrated parts of the lung, but they were most numerous in the infiltrated.

ART. 71.—*On Crural Phlebitis, unconnected with Pregnancy or the Parturient State.*

By DR. RANKING, Physician to the Norfolk and Norwich Hospital, &c.

(*British Medical Journal*, September, 1862.)

The occurrence of the disease to which, among others, the term "crural phlebitis" has been given, is so well known as a sequence of labour, and as one of the embarrassing associations of the puerperal state, that I should not have ventured to occupy your time, had the case which forms the basis of these observations found its origin in that more ordinary and familiar cause. But instances in which all the local manifestations of "white leg" occur totally unconnected with pregnancy and parturition are so comparatively rare, that the case in question has appeared to me a fit one for consideration.

The subject of this case was a housemaid in a large and healthily-situated country-house, who had been in every respect in perfect health until the beginning of last April, when she got thoroughly drenched with rain during menstruation, and remained five hours in her wet clothes. The next morning the catamenial discharge had entirely ceased, and she had a severe aching pain in her right groin, extending downwards nearly to the toes. This pain, in about thirty hours, was followed by swelling of the affected leg to such an extent as to confine her to her bed. After some medical treatment, the nature of which I have not ascertained, she was admitted, on April 27th, as an in-patient of the Norfolk and Norwich Hospital. At this time, she was about 20 years of age, very pallid and chlorotic in aspect, and labouring under considerable exhaustion. When first seen she was lying supine in bed, and unable to turn on either side from the great increase of pain in so doing. Her countenance was expressive of intense suffering; but there was no febrile disturbance. On the contrary, the pulse was feeble, and under 90.

On examining the chief source of her complaint, her right leg, the entire limb from the groin to the instep, was found to be swollen to

twice its natural size, the skin being tense and of a glistening white, giving to the touch a sensation precisely similar to that of ordinary phlegmasia dolens. There was no edema, properly so called, excepting over the instep; but the cellular tissue had what may be termed a "brawny" feel, and did not take any perceptible indentation on pressure. The whole track of the femoral vein was "cordy" and tender to the touch; but in the inguinal region pressure was scarcely tolerated. The resemblance of this condition to puerperal swelled leg was so marked, as to induce me at once to question her as to having been recently confined, or having aborted. She gave a history, however, completely negative either of a puerperal pregnancy, or of even sexual immaturity; and stated that she had menstruated regularly up to the time of her attack. Her statement was quite borne out by the appearance of the breasts. Her general symptoms were excessive anemia, with loss of strength and appetite; but there was no evidence of any internal organic disease. That very suggestive symptom, however, the jugular blood-murmur, was present.

Viewing this case, then, as in its pathological character identical with the crural phlebitis of the puerperal state, a line of treatment was followed adapted to that explanation of the symptoms. Although there was extreme tenderness over the femoral vein, especially in the inguinal region, her completely anemic condition, together with the assumption that exudation had already taken place, forbade the use of local depletion, which I believe to be of pre-eminent utility if used in the very onset of crural phlebitis in the puerperal state. I was content, in this case, to have the entire thigh rubbed diligently night and morning with the linimentum hydrargyri camphoratum, keeping the entire limb at the same time enveloped in cotton wool. The bowels were kept freely open; and five grains of carbonate of ammonia, with one drachm of citrate of potass, given several times in the day.

The improvement in the condition of the leg under this treatment was conspicuous at the end of a week, the limb being less painful, and perceptibly diminished in size. Citrate of iron was now added to the mixture, and was continued with progressive benefit until May 8th; when she called my attention to her left leg, which I then for the first time learned had been painful for four days, and which now had acquired a size far beyond that of the other leg on her admission, resembling more the shapeless leg of an elephant than that of a human being. The thigh was indeed monstrous in size, and the integument appeared distended to the last degree, at the same time white and brawny to the touch. The same treatment was applied to the fresh attack, and in about three days in this leg also rapid amendment took place; so that on June 7th, I find the report to be that the "thigh is flaccid and nearly of the natural size, the ankle and instep only being slightly œdematous." Both thighs had at this time a curious appearance, presenting numerous lineæ albuginæ, such as are seen in the abdomen of multiparous women.

The present condition (June) of the patient is all that can be

desired. By the additional aid of bandages, both limbs are of their the pallid countenance is replaced by the florid lips natural size; and cheeks of the healthy blooded subject; and she walks about freely the whole day without pain or swelling of the limb.

Little need be said of the treatment of these cases, whether puerperal or non-puerperal; but too much stress cannot be laid on the importance of attending to the earliest complaint of inguinal pain, especially in puerperal cases; for if it be discovered early, there is nothing so likely to arrest its course as free leeching; but to be of service this measure must be adopted before sufficient time has elapsed for obstruction of the vein to take place. When that is the case, and when, as in the present instance when first presented to my notice, the whole thigh and leg has become infiltrated, local abstraction of blood is obviously useless. Lymph has been effused, and depletion will not remove it. Under such circumstances, the treatment adopted in the case narrated appears to be the most rapidly successful—viz., free use of mercurial liniment, with a careful maintenance of the warmth of the limb. Some advantage is also to be derived, on hydrostatic principles, by keeping the limb on an inclined plane; the upward venous circulation being thereby greatly facilitated. Although non-puerperal crural phlebitis has long been known, there are but few cases on record. The subject is noted at the greatest length by Dr. Lee in the *Encyclopædia of Practical Medicine*, in the article Phlegmasia Dolens; but it is only alluded to by Dr. Ramsbotham and other obstetric writers. In the cases mentioned by these writers, the venous inflammation appears to have commenced, as in the puerperal condition, in the uterine veins; as, in all these cases there was, as in the present case, antecedent suppression of the menses, doubtless accompanied by great uterine congestion; or there existed malignant disease of the uterus itself.

The disease has also been seen in the male subject, as a sequence of dysentery, hæmorrhoids, or cancer of the rectum; the hæmorrhoidal veins in these cases being the primary seat of the phlebitic inflammation. It has been also known to be one of the final symptoms of exhausting maladies of long duration, as phthisis; in these cases arising probably from simple coagulation of the blood, due to feeble circulation and the proportionate superabundance of fibrine which has existed in such instances. Of this coincidence I have met with several cases.

Of the pathological conditions which give rise to crural phlebitis, we are now well-advised; numerous post-mortem examinations, especially in puerperal cases, revealing inflammatory deposits in the several venous coats, causing such thickening as ultimately diminishes the calibre of the vessel to a size incompatible with the normal return of the venous blood. Hence arise congestion of the capillary veins and cellular exudations, which induce the enormous distension of the limb. The reabsorption of these deposits and the restoration of a free current in the femoral vein, is the point to be aimed at in the treatment; and to what extent it may be accomplished is well illustrated in the cases recorded.

ART. 72.—*Two Cases of Extensive Arterial Obstructions from Separated Cardiac Vegetations.*

By Dr. GOODFELLOW, Physician to the Middlesex Hospital, &c.

(*Proceedings of the Royal Medical-Chirurgical Society*, June 24, 1862.)

These cases speak for themselves. The extent to which the plugging took place, the number of vessels involved, the morbid changes in and around the coats of the vessels at the seat of obstruction, and the consequences which ensued, give a peculiar interest to them. In both cases vegetations of considerable size had formed on the mitral valve and surrounding surface of the endocardium. Some of these had become detached, and caused obstruction to the circulation in several of the large arterial trunks; coagula formed around them, and complete occlusion followed. The symptoms were well marked—namely, pain, intense and agonising, at the seat of obstruction, and coldness and numbness at the distal extremities of the affected limbs, speedily followed by gangrene. In the first case the evidences of occlusion were observed about a month before the fatal event, and about seven days prior to the appearance of gangrene. In the second case the interval between the evidence of obstruction and the appearance of dry gangrene was shorter; the pathological changes in and around the walls of the arteries at the seat of obstruction were less extensive.

CASE I.—The first case was that of a woman, aged 30, who had had an attack of acute rheumatism twelve years prior to her admission into the hospital. The heart was damaged during that attack. She, however, was enabled to follow her usual occupation, with occasional interruptions, up to a short period before the appearance of the symptoms denoting obstruction.

CASE II.—The second case was that of a girl, aged 17. She had had an attack of acute rheumatism about three years before, complicated with pneumonia, but not with heart affection. Another attack of rheumatism occurred about eighteen months afterwards, which was complicated with endocarditis. From the time of this attack to the period of her seizure with her last fatal illness she suffered considerably from dyspnoea and frequent and severe pain in the præcordial region.

(D) CONCERNING THE ALIMENTARY SYSTEM.

ART. 73.—*On the Treatment of Peritonitis by the continued Application of Cold to the Abdomen.*

By M. BÉHIER,

(*Gazette Hebdomadaire de Médecine et Chirurgie*, April 6, 1862.)

M. Béhier, at a meeting of the French Academy of Medicine, held 1st April, 1862, reported the histories of several cases of metro-peritonitis which were rapidly cured by the exclusive application of continuous irrigations of cold water upon the abdomen; and then detailed the results that have been obtained by him in the treatment of puerperal affection by the application of ice. M. Béhier

applies the ice to the abdomen of the patient by means of gum caoutchouc bags filled with fragments of ice, renewing them every two hours. M. Béhier stated that since October, 1858, 801 females were confined at the hospital Beaujon: to 355 of these females ice was applied; 244 of the patients presented merely swelling of the annexes of the uterus, accompanied with slight pain, which speedily disappeared. In 68 the symptoms were of a more menacing character, with a decided febrile reaction and a commencing alteration of the patient's features. Thirty-nine of the 801 parturients died. But even in these cases, the application of the ice postponed the fatal result beyond the customary period at which it happens in cases where ice had not been applied. M. Béhier hopes, therefore, that the employment of the ice will be a means well adapted to counteract the affection of the peritoneum which is so common an element in the diseases of the puerperal female. It seems to him to be especially applicable to cases unattended with any general affection. He remarks that, in the numerous observations he has made, he has seen no injurious results occur from the practice advocated by him—not the slightest disturbance of the lochial discharge, or of the secretion of milk.

ART. 74.—*On an Unusual Abnormal Condition of the Mucous Membrane of the Tongue and Cheeks.*

By Dr. J. MOORE NELIGAN.

(*Dublin Quarterly Journal of Medical Science*, August, 1862.)

Dr. Neligan puts this curious, and apparently unique, case on record, as a fact which ought to be remembered by those who have to do with passing lives for assurance offices, but it has a more general interest than this.

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The next time I saw him was on the 3rd of June, 1861, when he appeared before me for examination for a further assurance, and then I could not

discover the slightest alteration in the tongue after the most careful examination ; I therefore reported as before, and the life was again accepted at the same extra rate. On the 30th of September another assurance was effected on his life by a different company on the former papers. About the end of the following month this gentleman was directed by the Dublin secretary of the first company which had assured his life, to wait on me with the view of being examined for an assurance proposed by a third party, when he stated that he could not do so for a few days, as he had accidentally bitten his tongue, and it was sore. I did not see him after this date, so that the remainder of his history I have learned from others.

It seems that, as the result of this bite, a small tubercle, about the size of a pea, formed on the edge of the tongue beneath the mucous membrane, its situation being on a level with the molar teeth. For this he sought the advice of some of our eminent surgeons, who differed in opinion as to the necessity of an operation ; the result being that he placed himself under the care of one of them who treated the disease with caustic applications. After some time, however, hæmorrhage set in, necessitating an operation, which he survived only a few months, cancer having invaded the glands in the neck.

As I have already said, my object in recording this case is to call attention to the existence of, I believe, a hitherto undiscovered abnormal condition of the mucous membrane of the tongue and cheeks ; to show the probability of its terminating in cancer ; and, as a necessary conclusion, to point out that such a deviation from the natural state of these parts would render a life ineligible for assurance.

ART. 75.—*On Dyspepsia.*

By M. PÉTREQUIN.

(*Journal of Practical Medicine and Surgery, and Medical Circular,*
October 22, 1862.)

M. Pétrequin considers it a demonstrated fact that the alkaline lactates exist naturally in the digestive organs, and that dyspepsia in its various forms is referable to an insufficiency of these compounds in the gastric juices. Hence he prescribes in functional disturbances of that viscus, the lactates of magnesia and soda in combination with pepsine.

When the saliva is deficient or acid, a symptom which, in combination with sour breath, decayed teeth, and laborious digestion, points, in his opinion, to gastro-intestinal disease, M. Pétrequin exhibits, before and after meals, two or three of the following lozenges, which should be allowed to melt slowly in the mouth, in order to promote and regulate the salivary secretion :—

R Magnesia lactatis (pulv.), ʒss. ;
Sodæ Saccharo-lactatis,
(containing one quarter of its weight of lactate,) ʒij.
Sacchari, ʒxviij ;
Mucilaginis Tragacanthæ, q.s.

Divide into lozenges of 15 grains weight, containing each one grain of lactate of soda and magnesia.

In acid dyspepsia, attended with flatulency, gastralgia, or gastro-dynia, a few of the same pastilles, before or after meals, will be found

serviceable, but the patient should at the same time take the half or the whole of the following powder:—

R Magnesia lactatis, gr. v ;
Sodæ saccharo lactatis, gr. iij.

When these medicines have failed, M. Pétrequin combines the use of pepsine with the exhibition of the alkaline lactates as follows:—

R Sodæ saccharo-lactatis, ʒij ;
Magnesiæ lactatis, ʒss ;
Pepsinæ c. amylo, ʒij ;
Sacchari pulv. ʒij ;
Mucilag. Tragacanthæ, q. s.

Divide into lozenges of 15 grains weight, which should be rapidly dried, and carefully protected from damp. Each will contain two grains of pepsine and one grain of lactate of soda and magnesia.

M. Corvisart has been but moderately pleased at the liberty taken with his pet remedy, pepsine ; he does not agree with M. Pétrequin as to the importance of the alkaline lactates, and the *Gazette Hebdomadaire* publishes a somewhat sharp correspondence on the subject between these two gentlemen ; this purely theoretical discussion has not, however, removed any of the clouds which obscure the pathology of dyspepsia, and practitioners are still doomed to feel their way, and to substitute, without any apparent reason, alkalies for pepsine, or poplar charcoal for either remedy.

ART. 76.—*Case of Aneurism of the Gastric Artery.*

By Mr. R. DONALDSON.

(*Madras Quarterly Journal of Medical Science*, April, 1862.)

CASE.—Mr. W. R., an East Indian, in his 60th year, was admitted into hospital on the 17th November, 1861, complaining of constant pain in the left hypochondrium, increased on motion and on pressure ; inability to lie on the back or to stand erect ; loss of appetite and of sleep, and general debility. Pulse weak, frequent ; skin cool ; bowels inclined to be constipated ; tongue foul ; countenance sallow and anxious. Patient has for the last month fallen away very much. On examination a firm immovable tumour was found extending from the left hypochondrium to the epigastric region—being more prominent in the former.

Patient, about twelve months previously, had suffered much from pain and fulness in the region of the spleen, attributed by him to splenic disease, the result of frequent attacks, in former years, of Mysore intermittent fever.

Soon after admission the enlargement in the epigastrium was observed to increase, and about the fifteenth day the tumour had attained the size of a moderate fist, assumed a definite outline, and it pulsated visibly. The impetus of the pulsations increased occasionally, and was always attended with aggravation of the pain, which now extended to the epigastrium and loins.

Stethoscopic examination revealed nothing. Respiration became short and hurried, but not distressing. Decubitus was impossible, and the only

posture in which the patient could obtain any rest was being seated in a chair with his knees drawn up and shoulders brought forward. This position, too, became irksome after a little, and rendered the pain in the loins almost intolerable.

About 1 A.M. on the 14th December, twenty-seven days after admission, the patient suddenly vomited about a pint of dark liquid and clotted blood, and a few hours afterwards passed about the same quantity per anum. This was followed by alarming symptoms of depression, which left the patient in a very debilitated condition. The tumour now decreased in size, but the impetus of the pulsation continued as forcible as before. For a day or two subsequent to the hæmorrhage, considerable relief from the pain was experienced, and the patient slept better, but he was still unable to rest in any other than the sitting position. The bowels became obstinately constipated, and required to be relieved by enemata. The pain in the abdomen and loins soon returned, and the latter became very distressing. The debility and emaciation progressed rapidly; all inclination for nourishment was lost; the feet became œdematous, and it was evident that death would soon ensue from exhaustion.

On the 26th December, twelve days after the hæmorrhage, the patient suddenly expired. Rapid distension of the stomach took place almost simultaneously with death.

By permission of his friends an examination of the body was made about fifteen hours after death.

On opening the stomach, which was considerably distended, it was found to contain upwards of three pints of fluid and clotted blood, which had its source in a tumour situated in the lesser omentum. The omentum itself was much thickened and indurated, forming a dense mass extending into the left hypochondrium. The tumour in the lesser omentum was found to be in connection with the gastric artery, which was the seat of a large aneurism situated along the lesser curve of the stomach, imbedded in the thickened omentum, and firmly adherent to the stomach, with which it communicated by an opening about half an inch in size.

On opening the aneurismal sac it was found to contain coagula adhering to its lining membrane, the internal surface was rough, thickened, and laminated—the laminæ appearing like fibrinous effusions, and being easily detached. The edges of the communication between the aneurismal tumour and the stomach were hard and well defined.

The spleen was small and shrivelled, but healthy in appearance. Liver normal.

The contents of the thorax were pushed high up into the cavity.

ART. 77.—*A Remedy for Sea-Sickness.*

By Dr. CORRIGAN.

(*"Ten Days in Athens,"* and *Lancet*, June 14, 1862.)

In all ordinary cases, if in dread of sickness, lie down on the back at least a quarter of an hour before the vessel starts. No position but that of recumbency on the back will do. Let head, body, and back become, as it were, a part of the vessel, participating in its motion without muscular effort. This precaution is often of itself sufficient. It will be of little use to assume this position after the sickness has commenced.

ART. 78.—*Hypertrophy of the Walls of the Stomach.*

By Dr. CASTELAIN.

(Gazette Hebdomadaire, September 26, 1862.)

CASE.—A woman, aged 60, had suffered for years from epigastric pains, which were latterly almost constant; digestion was slow and accompanied with eructations. In the epigastrium, a hard body could be felt, of the size of a foetus at full-term, and rising with each arterial pulsation. At the autopsy it was discovered that the stomach was the seat of the tumour; its cavity was much diminished, and the walls were almost uniformly indurated and thickened; the mucous membrane appeared healthy, except that it was thickened; the pylorus was free. The whole tissues of the stomach wall seemed evenly hypertrophied; microscopic examination showed a total absence of anything like cancer.

ART. 79.—*On the Use of Raw Meat in Obstinate Diarrhœa.*

By M. BOUCHUT.

(Journal of Practical Medicine and Surgery, and Medical Circular, September 24, 1862.)

Several little girls were lately pointed out to us in M. Bouchut's wards, suffering from obstinate diarrhœa, for which raw meat was exhibited as a remedy. Thus we noticed in St. Margaret's ward a child aged seven, who had been admitted into the hospital for diarrhœa of long standing; trisnitrate of bismuth had unavailingly been resorted to. M. Bouchut pronounced the case to be one of chronic enteritis, unconnected with tuberculosis; he prescribed every day two ounces of raw meat, and on the third day the dejections became solid. Another little girl, aged twelve, lying in the same ward, passed five or six liquid motions in the day; all the remedies resorted to had failed in checking the intestinal relaxation, and the child was much emaciated. In this instance also two ounces of raw meat were prescribed each day, and in the course of three weeks the patient recovered her strength, and all the outward appearances of health.

The nurse of the ward, an extremely intelligent person, exhibits this somewhat repulsive description of food, sometimes in the shape of balls rolled in salt or sugar, according to the child's fancy, or as a sandwich between two pieces of bread covered with butter or jam. The little patients are thus easily persuaded to take this pulp, the taste of which is not disagreeable.

ART. 80.—*On the Good Effects of Charcoal Enemata in Dysentery.*

By Dr. —.

(Lancet, May 17, 1862.)

CASE.—James M., a block-cutter, aged thirty-four, whose habits are regular, was admitted on April 3rd into St. Bartholomew's Hospital, under

Dr. Farre. Without any clearly assignable cause he was attacked with all the symptoms of dysentery ten weeks before admission, the motions being very bloody, and the pain in the epigastrium severe. He was treated at first by Dr. Farre's usual plan of grey and Dover's powders, without any effect. He was then given acetate of lead and opium with some benefit; but the stools continued to be horribly offensive. This last condition was arrested by charcoal injections, which acted most admirably; their use was required for about eight days only. When we last saw the patient (May 5th), the dysenteric symptoms had ceased about two weeks, and he was nearly well. He was taking taraxacum with infusion of gentian.

The use of charcoal enemata is worthy of remembrance in such cases as the above, when the stools persist in maintaining a very offensive character.

ART. 81.—*On Constipation.*

By M. TROUSSEAU, Physician to the Hôtel Dieu, Paris.

(*British Medical Journal*, June 14, 1862.)

We understand by the term constipation, scanty evacuation of fæces with absence of mechanical impediment to defæcation. If there be mechanical impediment, there is retention of the fæces. The two conditions are very different. Some individuals may pass two motions each day, and another one motion only every two or three days; and this without there being any derangement of the bowels in the one case, or constipation in the other. The number of the motions depend, normally, on the varying proportions of salivary, hepatic, and pancreatic juices, which are mixed with the residue of the alimentary matters. With regard to the resistance offered to defæcation by the sphincter, M. Trousseau remarks, that in the infant at the breast this resistance is very slight. At a more advanced age the resistance is more strongly marked. Voluntary opposition to defæcation causes the fæces to accumulate in the rectum, distending it and injuring its contractility, and causing its action to be sluggish; and as there is sympathy in action between all parts of the tube, the peristaltic motion is arrested in the upper part of the intestines, and thus the constipation is increased. The first fact, then, to be noted is, that every person who voluntarily constipates his bowels exposes himself to the risk of being morbidly constipated; and, on the other hand, that whoever regularly obeys the call thereby prevents the accident of constipation.

At different ages this call is very differently felt. It is little felt in old age; and, consequently, the fæces are apt to accumulate to an excessive degree in the aged. We all know the result of this constipation; but it is not enough known that the stercoral accumulation sometimes occasions diarrhœa, through the local irritation produced by the hardened fæces. In old age, also, constipation is favoured by the feebleness of the muscles of expiration; and in this respect women who have had many children are in a like condition. The power of straining is lost.

Certain diseases again are the cause and effect of constipation. Hæmorrhoids, which are sometimes, and anal fissures, which are

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[illegible]

Vegetable diet is the best in these cases. Green vegetables and raw fruit, so far as the stomach will bear them, should form the basis of the food, without, however, excluding animal food. Some persons are pained by a cup of milk, some by milk-coffee, and some by beer; each may be used. Brown bread, so much used in England and America is also an excellent laxative. There are persons who only have a motion after smoking a pipe or a cigar; consequently, M. Trousseau often prescribes a cigarette after breakfast to some of his female patients who are of robust constitution. M. Bretonneau says that the extract and powder of belladonna mixed together is a sovereign remedy in constipation; and the action of nicotine is much like the action of belladonna. Castor oil comes in to the aid of this. Then, in refractory cases, we have purgative pills. These pills are, as a rule, formed of aloes, rhubarb, colocynth, and a solanaceous plant. Hydrotherapy also assists us

desired. By the additional aid of bandages, both limbs are of their the pallid countenance is replaced by the florid lips natural size; and cheeks of the healthy blooded subject; and she walks about freely the whole day without pain or swelling of the limb.

Little need be said of the treatment of these cases, whether puerperal or non-puerperal; but too much stress cannot be laid on the importance of attending to the earliest complaint of inguinal pain, especially in puerperal cases; for if it be discovered early, there is nothing so likely to arrest its course as free leeching; but to be of service this measure must be adopted before sufficient time has elapsed for obstruction of the vein to take place. When that is the case, and when, as in the present instance when first presented to my notice, the whole thigh and leg has become infiltrated, local abstraction of blood is obviously useless. Lymph has been effused, and depletion will not remove it. Under such circumstances, the treatment adopted in the case narrated appears to be the most rapidly successful—viz., free use of mercurial liniment, with a careful maintenance of the warmth of the limb. Some advantage is also to be derived, on hydrostatic principles, by keeping the limb on an inclined plane; the upward venous circulation being thereby greatly facilitated. Although non-puerperal crural phlebitis has long been known, there are but few cases on record. The subject is noted at the greatest length by Dr. Lee in the *Encyclopædia of Practical Medicine*, in the article Phlegmasia Dolens; but it is only alluded to by Dr. Ramsbotham and other obstetric writers. In the cases mentioned by these writers, the venous inflammation appears to have commenced, as in the puerperal condition, in the uterine veins; as, in all these cases there was, as in the present case, antecedent suppression of the menses, doubtless accompanied by great uterine congestion; or there existed malignant disease of the uterus itself.

The disease has also been seen in the male subject, as a sequence of dysentery, hæmorrhoids, or cancer of the rectum; the hæmorrhoidal veins in these cases being the primary seat of the phlebitic inflammation. It has been also known to be one of the final symptoms of exhausting maladies of long duration, as phthisis; in these cases arising probably from simple coagulation of the blood, due to feeble circulation and the proportionate superabundance of fibrine which has existed in such instances. Of this coincidence I have met with several cases.

Of the pathological conditions which give rise to crural phlebitis, we are now well-advised; numerous post-mortem examinations, especially in puerperal cases, revealing inflammatory deposits in the several venous coats, causing such thickening as ultimately diminishes the calibre of the vessel to a size incompatible with the normal return of the venous blood. Hence arise congestion of the capillary veins and cellular exudations, which induce the enormous distension of the limb. The reabsorption of these deposits and the restoration of a free current in the femoral vein, is the point to be aimed at in the treatment; and to what extent it may be accomplished is well illustrated in the cases recorded.

ART. 72.—*Two Cases of Extensive Arterial Obstructions from Separated Cardiac Vegetations.*

By Dr. GOODFELLOW, Physician to the Middlesex Hospital, &c.
(*Proceedings of the Royal Medico-Chirurgical Society*, June 24, 1862.)

These cases speak for themselves. The extent to which the plugging took place, the number of vessels involved, the morbid changes in and around the coats of the vessels at the seat of obstruction, and the consequences which ensued, give a peculiar interest to them. In both cases vegetations of considerable size had formed on the mitral valve and surrounding surface of the endocardium. Some of these had become detached, and caused obstruction to the circulation in several of the large arterial trunks; coagula formed around them, and complete occlusion followed. The symptoms were well marked—namely, pain, intense and agonising, at the seat of obstruction, and coldness and numbness at the distal extremities of the affected limbs, speedily followed by gangrene. In the first case the evidences of occlusion were observed about a month before the fatal event, and about seven days prior to the appearance of gangrene. In the second case the interval between the evidence of obstruction and the appearance of dry gangrene was shorter; the pathological changes in and around the walls of the arteries at the seat of obstruction were less extensive.

CASE I.—The first case was that of a woman, aged 30, who had had an attack of acute rheumatism twelve years prior to her admission into the hospital. The heart was damaged during that attack. She, however, was enabled to follow her usual occupation, with occasional interruptions, up to a short period before the appearance of the symptoms denoting obstruction.

CASE II.—The second case was that of a girl, aged 17. She had had an attack of acute rheumatism about three years before, complicated with pneumonia, but not with heart affection. Another attack of rheumatism occurred about eighteen months afterwards, which was complicated with endocarditis. From the time of this attack to the period of her seizure with her last fatal illness she suffered considerably from dyspnoea and frequent and severe pain in the præcordial region.

(D) CONCERNING THE ALIMENTARY SYSTEM.

ART. 73.—*On the Treatment of Peritonitis by the continued Application of Cold to the Abdomen.*

By M. BÉHIER,

(*Gazette Hebdomadaire de Médecine et Chirurgie*, April 6, 1862.)

M. Béhier, at a meeting of the French Academy of Medicine, held 1st April, 1862, reported the histories of several cases of metro-peritonitis which were rapidly cured by the exclusive application of continuous irrigations of cold water upon the abdomen; and then detailed the results that have been obtained by him in the treatment of puerperal affection by the application of ice. M. Béhier

applies the ice to the abdomen of the patient by means of gum caoutchouc bags filled with fragments of ice, renewing them every two hours. M. Béhier stated that since October, 1858, 801 females were confined at the hospital Beaujon: to 355 of these females ice was applied; 244 of the patients presented merely swelling of the annexes of the uterus, accompanied with slight pain, which speedily disappeared. In 68 the symptoms were of a more menacing character, with a decided febrile reaction and a commencing alteration of the patient's features. Thirty-nine of the 801 parturients died. But even in these cases, the application of the ice postponed the fatal result beyond the customary period at which it happens in cases where ice had not been applied. M. Béhier hopes, therefore, that the employment of the ice will be a means well adapted to counteract the affection of the peritoneum which is so common an element in the diseases of the puerperal female. It seems to him to be especially applicable to cases unattended with any general affection. He remarks that, in the numerous observations he has made, he has seen no injurious results occur from the practice advocated by him—not the slightest disturbance of the lochial discharge, or of the secretion of milk.

ART. 74.—*On an Unusual Abnormal Condition of the Mucous Membrane of the Tongue and Cheeks.*

By Dr. J. MOORE NELIGAN.

(*Dublin Quarterly Journal of Medical Science*, August, 1862.)

Dr. Neligan puts this curious, and apparently unique, case on record, as a fact which ought to be remembered by those who have to do with passing lives for assurance offices, but it has a more general interest than this.

CASE.—H. E., aged 46 next birthday, appeared before me to be examined for assurance on the 17th of April, 1857. In his paper he stated that he never had any illness since childhood, and that he never had occasion even to consult a medical man. His father died at the age of 78, and his mother was living, aged 77. He had, originally, two brothers and three sisters; his two brothers were dead, one at the age of three weeks, and the other at the age of 21 years of fever; one of his sisters died at the age of 48 of acute bronchitis; the other two were living, and in good health. As the result of my examination I reported, that on stethoscopic examination the heart and lungs were healthy, as were also the viscera in the other cavities, as far as could be ascertained; that he had the appearance of a person of the age stated, and of one whose habits and mode of living had been uniformly temperate; that he was a stout, well-made man, about the middle height, of a sanguine temperament; and that there was nothing in his appearance or conformation that would lead one to suppose he had a tendency to any particular complaint. And, in giving my opinion on the life, I stated that as regards his present health it was good; as to the state of the different organs they were healthy, but the tongue was singularly affected, the natural membrane covering it and the inside of the cheeks being changed into a thick white skin, like a kid glove, and uneven on the surface; as to his constitution, that it appeared to be sound; and,

as to the eligibility of the life for assurance, that it would be a first-class life were it not for the state of the tongue, which I had never seen anything like before, nor could the proposer assign any cause for it; he said that it had been so for the last thirty years, that his taste was as perfect as that of any other person, nor had he any soreness or uncomfortable feel in it. I concluded my opinion by adding that in the case of so singular an affection I would advise an extra rate of five or seven years to be charged.

The condition of the mucous membrane of the tongue and inside of the cheeks here alluded to was very remarkable. The tongue was perfectly clean, that is to say, there was no fur on it, nothing that could be removed by scraping or washing; it was of a dead white colour, resembling, perhaps, rather the appearance of the surface of the tongue in a boiled calf's head than a kid-skin glove, the lustre of which it wanted; it was uneven on the surface, but not wrinkled or fissured, nor presenting the papillated character of the organ in its normal state, there was a more general unevenness. The same condition existed in the mucous membrane lining the cheeks and the gums in contact with them, but the covering was evidently less thick; the roof of the mouth, the palate, the throat, the tonsils, and the uvula were quite natural in appearance. There was no unnatural dryness or change of temperature of the mouth; the salivary secretion was abundant, the gustatory powers perfect, described by the gentleman himself as being unusually sensitive, and the speech was in no way affected. On closely questioning him, he stated that he noticed this change when he was about 18 or 19 years of age, and that it then was just as complete as when I examined him. He thought when he first discovered it that it must have been caused by a habit he had of indulging in smoking to excess, and of always smoking the tobacco in the shortest possible pipe, so as to get the smoke into his mouth as hot as he was able to bear it.

This abnormal condition was quite new to me, although I had examined many hundred of lives for assurance, nor after much research could I find any similar case recorded; however, not seeing anything of sufficient importance in it as being likely to shorten life, I gave the opinion above quoted; but the head office in London considering the case as one either for rejection or for acceptance at the ordinary rates, on the advice of their chief medical advisers, who considered the favourable features to preponderate much over anything which could be regarded as unfavourable, decided on accepting it without any extra rate of premium. Much delay occurred in completing the transaction, in consequence of its being connected with a loan on landed property, and it being found necessary to assure the life for a much larger sum, this gentleman again appeared before me on the 25th of January, 1858, when I gave the following report:—"I hereby certify, that I this day examined H. E., and that his life is now as eligible for assurance as at the date of my former report upon it. I am still of opinion, that in consequence of the peculiarly unnatural state of the skin of the tongue and mouth, an extra rate of premium should be charged." Some correspondence then ensued between the head office and myself, in which I explained more fully my reasons for recommending the increased rate, the chief one being, that if any accident occurred to the tongue, in its abnormal state, cancer might result: finally the life was accepted at an extra rate of five years, the former policy being surrendered.

I again examined this gentleman on the 29th of April in the same year, the matter not having been sooner completed, when I found no change to report; and on the 11th of May another assurance company accepted his life for a large sum, on my former reports, at the same extra rates.

The next time I saw him was on the 3rd of June, 1861, when he appeared before me for examination for a further assurance, and then I could not

discover the slightest alteration in the tongue after the most careful examination ; I therefore reported as before, and the life was again accepted at the same extra rate. On the 30th of September another assurance was effected on his life by a different company on the former papers. About the end of the following month this gentleman was directed by the Dublin secretary of the first company which had assured his life, to wait on me with the view of being examined for an assurance proposed by a third party, when he stated that he could not do so for a few days, as he had accidentally bitten his tongue, and it was sore. I did not see him after this date, so that the remainder of his history I have learned from others.

It seems that, as the result of this bite, a small tubercle, about the size of a pea, formed on the edge of the tongue beneath the mucous membrane, its situation being on a level with the molar teeth. For this he sought the advice of some of our eminent surgeons, who differed in opinion as to the necessity of an operation ; the result being that he placed himself under the care of one of them who treated the disease with caustic applications. After some time, however, hæmorrhage set in, necessitating an operation, which he survived only a few months, cancer having invaded the glands in the neck.

As I have already said, my object in recording this case is to call attention to the existence of, I believe, a hitherto undiscovered abnormal condition of the mucous membrane of the tongue and cheeks ; to show the probability of its terminating in cancer ; and, as a necessary conclusion, to point out that such a deviation from the natural state of these parts would render a life ineligible for assurance.

ART. 75.—*On Dyspepsia.*

By M. PÉTREQUIN.

(*Journal of Practical Medicine and Surgery, and Medical Circular,*
October 22, 1862.)

M. Pétrequin considers it a demonstrated fact that the alkaline lactates exist naturally in the digestive organs, and that dyspepsia in its various forms is referable to an insufficiency of these compounds in the gastric juices. Hence he prescribes in functional disturbances of that viscus, the lactates of magnesia and soda in combination with pepsine.

When the saliva is deficient or acid, a symptom which, in combination with sour breath, decayed teeth, and laborious digestion, points, in his opinion, to gastro-intestinal disease, M. Pétrequin exhibits, before and after meals, two or three of the following lozenges, which should be allowed to melt slowly in the mouth, in order to promote and regulate the salivary secretion :—

R Magnesia lactatis (pulv.), ʒss. ;
Sodæ Saccharo-lactatis,
(containing one quarter of its weight of lactate,) ʒij.
Sacchari, ʒxviij ;
Mucilaginis Tragacanthæ, q.s.

Divide into lozenges of 15 grains weight, containing each one grain of lactate of soda and magnesia.

In acid dyspepsia, attended with flatulency, gastralgia, or gastro-dynia, a few of the same pastilles, before or after meals, will be found

serviceable, but the patient should at the same time take the half or the whole of the following powder:—

R Magnesiæ lactatis, gr. v. ;
Sodæ saccharo lactatis, gr. iij.

When these medicines have failed, M. Pétrequin combines the use of pepsine with the exhibition of the alkaline lactates as follows:—

R Sodæ saccharo-lactatis, ʒij ;
Magnesiæ lactatis, ʒss ;
Pepsinæ c. amylo, ʒij ;
Sacchari pulv. ʒij. ;
Mucilag. Tragacanthæ, q. s.

Divide into lozenges of 15 grains weight, which should be rapidly dried, and carefully protected from damp. Each will contain two grains of pepsine and one grain of lactate of soda and magnesia.

M. Corvisart has been but moderately pleased at the liberty taken with his pet remedy, pepsine; he does not agree with M. Pétrequin as to the importance of the alkaline lactates, and the *Gazette Hebdomadaire* publishes a somewhat sharp correspondence on the subject between these two gentlemen; this purely theoretical discussion has not, however, removed any of the clouds which obscure the pathology of dyspepsia, and practitioners are still doomed to feel their way, and to substitute, without any apparent reason, alkalies for pepsine, or poplar charcoal for either remedy.

ART. 76.—*Case of Aneurism of the Gastric Artery.*

By Mr. R. DONALDSON.

(*Madras Quarterly Journal of Medical Science*, April, 1862.)

CASE.—Mr. W. R., an East Indian, in his 60th year, was admitted into hospital on the 17th November, 1861, complaining of constant pain in the left hypochondrium, increased on motion and on pressure; inability to lie on the back or to stand erect; loss of appetite and of sleep, and general debility. Pulse weak, frequent; skin cool; bowels inclined to be constipated; tongue foul; countenance sallow and anxious. Patient has for the last month fallen away very much. On examination a firm immovable tumour was found extending from the left hypochondrium to the epigastric region—being more prominent in the former.

Patient, about twelve months previously, had suffered much from pain and fulness in the region of the spleen, attributed by him to splenic disease, the result of frequent attacks, in former years, of Mysore intermittent fever.

Soon after admission the enlargement in the epigastrium was observed to increase, and about the fifteenth day the tumour had attained the size of a moderate fist, assumed a definite outline, and it pulsed visibly. The impetus of the pulsations increased occasionally, and was always attended with aggravation of the pain, which now extended to the epigastrium and loins.

Stethoscopic examination revealed nothing. Respiration became short and hurried, but not distressing. Decubitus was impossible, and the only

posture in which the patient could obtain any rest was being seated in a chair with his knees drawn up and shoulders brought forward. This position, too, became irksome after a little, and rendered the pain in the loins almost intolerable.

About 1 A.M. on the 14th December, twenty-seven days after admission, the patient suddenly vomited about a pint of dark liquid and clotted blood, and a few hours afterwards passed about the same quantity per anum. This was followed by alarming symptoms of depression, which left the patient in a very debilitated condition. The tumour now decreased in size, but the impetus of the pulsation continued as forcible as before. For a day or two subsequent to the hæmorrhage, considerable relief from the pain was experienced, and the patient slept better, but he was still unable to rest in any other than the sitting position. The bowels became obstinately constipated, and required to be relieved by enemata. The pain in the abdomen and loins soon returned, and the latter became very distressing. The debility and emaciation progressed rapidly; all inclination for nourishment was lost; the feet became œdematous, and it was evident that death would soon ensue from exhaustion.

On the 26th December, twelve days after the hæmorrhage, the patient suddenly expired. Rapid distension of the stomach took place almost simultaneously with death.

By permission of his friends an examination of the body was made about fifteen hours after death.

On opening the stomach, which was considerably distended, it was found to contain upwards of three pints of fluid and clotted blood, which had its source in a tumour situated in the lesser omentum. The omentum itself was much thickened and indurated, forming a dense mass extending into the left hypochondrium. The tumour in the lesser omentum was found to be in connection with the gastric artery, which was the seat of a large aneurism situated along the lesser curve of the stomach, imbedded in the thickened omentum, and firmly adherent to the stomach, with which it communicated by an opening about half an inch in size.

On opening the aneurismal sac it was found to contain coagula adhering to its lining membrane, the internal surface was rough, thickened, and laminated—the laminæ appearing like fibrinous effusions, and being easily detached. The edges of the communication between the aneurismal tumour and the stomach were hard and well defined.

The spleen was small and shrivelled, but healthy in appearance. Liver normal.

The contents of the thorax were pushed high up into the cavity.

ART. 77.—*A Remedy for Sea-Sickness.*

By Dr. CORRIGAN.

(*"Ten Days in Athens,"* and *Lancet*, June 14, 1862.)

In all ordinary cases, if in dread of sickness, lie down on the back at least a quarter of an hour before the vessel starts. No position but that of recumbency on the back will do. Let head, body, and back become, as it were, a part of the vessel, participating in its motion without muscular effort. This precaution is often of itself sufficient. It will be of little use to assume this position after the sickness has commenced.

ART. 78.—*Hypertrophy of the Walls of the Stomach.*

By Dr. CASTELAIN.

(Gazette Hebdomadaire, September 26, 1862.)

CASE.—A woman, aged 60, had suffered for years from epigastric pains, which were latterly almost constant; digestion was slow and accompanied with eructations. In the epigastrium, a hard body could be felt, of the size of a fetus at full-term, and rising with each arterial pulsation. At the autopsy it was discovered that the stomach was the seat of the tumour; its cavity was much diminished, and the walls were almost uniformly indurated and thickened; the mucous membrane appeared healthy, except that it was thickened; the pylorus was free. The whole tissues of the stomach wall seemed evenly hypertrophied; microscopic examination showed a total absence of anything like cancer.

ART. 79.—*On the Use of Raw Meat in Obstinate Diarrhœa.*

By M. BOUCHUT.

(Journal of Practical Medicine and Surgery, and Medical Circular, September 24, 1862.)

Several little girls were lately pointed out to us in M. Bouchut's wards, suffering from obstinate diarrhœa, for which raw meat was exhibited as a remedy. Thus we noticed in St. Margaret's ward a child aged seven, who had been admitted into the hospital for diarrhœa of long standing; trisnitrate of bismuth had unavailingly been resorted to. M. Bouchut pronounced the case to be one of chronic enteritis, unconnected with tuberculosis; he prescribed every day two ounces of raw meat, and on the third day the dejections became solid. Another little girl, aged twelve, lying in the same ward, passed five or six liquid motions in the day; all the remedies resorted to had failed in checking the intestinal relaxation, and the child was much emaciated. In this instance also two ounces of raw meat were prescribed each day, and in the course of three weeks the patient recovered her strength, and all the outward appearances of health.

The nurse of the ward, an extremely intelligent person, exhibits this somewhat repulsive description of food, sometimes in the shape of balls rolled in salt or sugar, according to the child's fancy, or as a sandwich between two pieces of bread covered with butter or jam. The little patients are thus easily persuaded to take this pulp, the taste of which is not disagreeable.

ART. 80.—*On the Good Effects of Charcoal Enemata in Dysentery.*

By Dr. —.

(Lancet, May 17, 1862.)

CASE.—James M., a block-cutter, aged thirty-four, whose habits are regular, was admitted on April 3rd into St. Bartholomew's Hospital, under

Dr. Farre. Without any clearly assignable cause he was attacked with all the symptoms of dysentery ten weeks before admission, the motions being very bloody, and the pain in the epigastrium severe. He was treated at first by Dr. Farre's usual plan of grey and Dover's powders, without any effect. He was then given acetate of lead and opium with some benefit; but the stools continued to be horribly offensive. This last condition was arrested by charcoal injections, which acted most admirably; their use was required for about eight days only. When we last saw the patient (May 5th), the dysenteric symptoms had ceased about two weeks, and he was nearly well. He was taking taraxacum with infusion of gentian.

The use of charcoal enemata is worthy of remembrance in such cases as the above, when the stools persist in maintaining a very offensive character.

ART. 81.—*On Constipation.*

By M. TROUSSEAU, Physician to the Hôtel Dieu, Paris.

(*British Medical Journal*, June 14, 1862.)

We understand by the term constipation, scanty evacuation of fæces with absence of mechanical impediment to defæcation. If there be mechanical impediment, there is retention of the fæces. The two conditions are very different. Some individuals may pass two motions each day, and another one motion only every two or three days; and this without there being any derangement of the bowels in the one case, or constipation in the other. The number of the motions depend, normally, on the varying proportions of salivary, hepatic, and pancreatic juices, which are mixed with the residue of the alimentary matters. With regard to the resistance offered to defæcation by the sphincter, M. Trousseau remarks, that in the infant at the breast this resistance is very slight. At a more advanced age the resistance is more strongly marked. Voluntary opposition to defæcation causes the fæces to accumulate in the rectum, distending it and injuring its contractility, and causing its action to be sluggish; and as there is sympathy in action between all parts of the tube, the peristaltic motion is arrested in the upper part of the intestines, and thus the constipation is increased. The first fact, then, to be noted is, that every person who voluntarily constipates his bowels exposes himself to the risk of being morbidly constipated; and, on the other hand, that whoever regularly obeys the call thereby prevents the accident of constipation.

At different ages this call is very differently felt. It is little felt in old age; and, consequently, the fæces are apt to accumulate to an excessive degree in the aged. We all know the result of this constipation; but it is not enough known that the stercoral accumulation sometimes occasions diarrhœa, through the local irritation produced by the hardened fæces. In old age, also, constipation is favoured by the feebleness of the muscles of expiration; and in this respect women who have had many children are in a like condition. The power of straining is lost.

Certain diseases again are the cause and effect of constipation. Hæmorrhoids, which are sometimes, and anal fissures, which are

always, painful, cause constipation, through the pain which defæcation excites in the subjects of those affections. Displacements of the uterus also cause constipation.

Great eaters regularly evacuate their motions; small eaters are generally constipated. Animal food is more constipating than fresh vegetables and fruits. Thus, some women are only constipated in winter, when deprived of fruits. From all this it would appear that the treatment of constipation is, for the most part, physiological. It is certain, at all events, that two conditions are indispensable in the treatment; viz., great firmness on the part of the physician, and extreme docility on the part of the patient. There must also be an inclination in the patient to go to the closet; and all obstacles to the carrying out of the inclination should be removed. M. Trousseau mentions the case of a young woman who was "horribly constipated;" and he accidentally discovered that she was so because of the filthy condition of the closet. He reproached the husband; who thereupon "transformed this filthy hole into a convenient and even elegant cabinet." This change entirely cured the constipation of the young wife. The patient, moreover, should go every day at the same hour to the closet, and under the same conditions. He should attempt to pass fæces for five or ten minutes; and if, on the first day, his efforts are useless, he should commence again the same plan on the following day at the same hour. If the second attempt fail, an injection of water should be used; and this treatment should be pursued on the third and fourth days, if necessary. This treatment is usually successful. The best hour for going to the closet is in the half-hour succeeding to the most copious meal, in virtue of the old adage that one nail drives out another. The peristaltic action tends to solicit the physiological and mechanical action required in defæcation. Lavements should be given only every second day; and if the faecal matter is very hard, eggs may be added to the water, to replace by their viscosity the mucus. M. Trousseau also prescribes suppositories of soap, honey, &c. in such cases. About six drachms of honey are heated, and powdered gum added in sufficient quantity for the suppositories.

Vegetable diet is the best in these cases. Green vegetables and raw fruit, so far as the stomach will bear them, should form the basis of the food, without, however, excluding animal food. Some persons are purged by a cup of milk, some by milk-coffee, and some by beer: each may be used. Brown bread, so much used in England and America, is also an excellent laxative. There are persons who only have a motion after smoking a pipe or a cigar; consequently, M. Trousseau often prescribes a cigarette after breakfast to some of his female patients who are of robust constitution. M. Bretonneau says that the extract and powder of belladonna mixed together is a sovereign remedy in constipation; and the action of nicotine is much like the action of belladonna. Castor-oil comes in to the aid of this. Then, in refractory cases, we have purgative pills. These pills are, as a rule, formed of aloes, rhubarb, colocynth, and a solanaceous plant. Hydrotherapeia also assists us

with its glass of cold water in the morning, and its douches and sea-bathing; so that therapeutics are not without weapons in constipation. The means of attacking it are numerous; and the skill of the physician is shown in his power of selecting the appropriate means.

ART. 82.—*Hæmorrhage and Gangrene of the Intestine caused by Embolia of the Superior Mesenteric Artery.*

(Allg. Wiener Zeitsch., 9—12. 1862.)

CASE.—A man, aged 50, died after a few days' illness with hæmorrhage from the bowels and green vomitings. On *post-mortem* examination nearly the whole of the small and part of the large intestines were found partially gangrenous, and the lesions were seen to correspond with the distribution of the superior mesenteric artery as to its trunk. The latter was found on examination to be occluded by a solid resistant clot, two inches long, and adherent to its walls. Below this a second coagulum extended into the principal branches. Besides inflammation and subsequent gangrene of the intestine, the arterial obstruction had caused intestinal hæmorrhage, serous effusion into the peritoneum, and thickening of the intestinal walls. The rapidity of the fatal symptoms, and the fact that similar clots to that in the artery were found in the auricles, sufficiently proved the embolic origin of this affection. The present case is the eighth which has been placed on record; it was under the care of Professor Oppolzer.

ART. 83.—*Description of Two New Tanioids in Man.*

By Dr. WEINLAND.

(Schmidt, No. 4, 1862.)

Dr. Weinland, who long resided at Cambridge, in Massachusetts, and who assisted Agassiz in his helminthological labours, describes two new tapeworms. I. In the pathological collection of Professor Jackson, belonging to the Boston "Society for the Improvement of Medical Science," there are preserved in a bottle six cystic worms, which are labelled, "*Cysticerci cellulosa*," but which have *three* rows of hooks instead of two, and must therefore be considered a new species; Weinland calls it *C. acanthotrias*, and the tapeworm which comes from it he calls *Acanthotrias*. The specimen in question was taken from the muscular tissues of a white woman, aged 58, who died of tubercle; a solitary *cysticercus* was also found in the dura mater. II. In the same collection is found a small tapeworm, from a child, which, although the head was wanting, Weinland immediately recognised as a new species, and named *Tania flavopunctata*. The yellow spots, in the middle of the joints, from which the name is derived, are testicles. The eggs are altogether characteristic. Weinland also states that he has recently observed *T. cucumerina* in a child.

ART. 84.—*On Certain Points in the Pathology of the Liver.*

By Dr. BEALE, Physician to King's College Hospital, &c.

(Medical Times and Gazette, April 26, 1862.)

In one of his recent lectures at the Royal College of Physicians, Dr. Beale exhibited some excellent specimens, showing the confirmation afforded to his views by the results of disease, either by alterations in the structure and calibre of the vessels, or by changes taking place in the cells. It is impossible to define the exact limits of health; the gradations by which the natural balance is overthrown are so slight as to escape our observation, though they would, of course, if discovered, surpass in interest all other stages of disease. The most important changes are those which occur in the cells; which sometimes shrink and wither, and sometimes are distended with abnormal materials, as in the fatty and scrofulous or amyloid livers. Congestion is made apparent by a change of colour, as was noticed long ago; the lobules exhibiting a brown stratum and a yellow stratum, varying according to the different amount of congestion. This state of things can be imitated by injection in a healthy liver. The appearance of hepatic venous congestion, caused usually by the backward pressure of blood resulting from a diseased heart, may be mistaken for that of portal venous congestion; the central capillaries of one lobule communicating with those of adjacent lobules, and giving the appearance of circles. The mistake can be immediately rectified by injection. The phrase "fatty degeneration," as applied to the liver, is open to some objections; for in health the cells contain many fat-globules, and in this disease are gorged and increased in size by the presence of additional fatty matter. This is probably the result of a fatty pabulum supplied to the liver, the pabulum being furnished by the disintegration of other tissues. Decaying muscle, or even fibrin, will furnish this fat, which in health is removed, but in disease is stored up in enormous quantity. Fatty matter at the circumference of the lobule is more commonly present than absent in well-fed persons after the age of 40 or 45. In phthisis it is very common, showing a white ring by reflected light. The appearances exhibited by the cells are,—first, a few oil-globules in the formed material of the so-called cell; next, one or two large globules adjacent to the nucleus; then a very large globule with the granular matter of the so-called cell extended round it like a cell-wall, with nuclei here and there in its substance; lastly, this covering sometimes bursts. Among the substances furnished by these cells are fat, resinous bile, colouring matter, and sugar, or rather amyloid substance, as Dr. Pavy's interesting experiments seem to show. The deposit of fat, this observer notices, may be caused by dividing or galvanizing the sympathetic nerve. It is in the cells at the margin of the lobule where, according to Dr. Beale's theory, the greatest activity always prevails, from the proximity of the portal vein, that fat is usually deposited; but in some cases it is found at the centre. Specimens were shown, which

desired. By the additional aid of bandages, both limbs are of their the pallid countenance is replaced by the florid lips natural size; and cheeks of the healthy blooded subject; and she walks about freely the whole day without pain or swelling of the limb.

Little need be said of the treatment of these cases, whether puerperal or non-puerperal; but too much stress cannot be laid on the importance of attending to the earliest complaint of inguinal pain, especially in puerperal cases; for if it be discovered early, there is nothing so likely to arrest its course as free leeching; but to be of service this measure must be adopted before sufficient time has elapsed for obstruction of the vein to take place. When that is the case, and when, as in the present instance when first presented to my notice, the whole thigh and leg has become infiltrated, local abstraction of blood is obviously useless. Lymph has been effused, and depletion will not remove it. Under such circumstances, the treatment adopted in the case narrated appears to be the most rapidly successful—viz., free use of mercurial liniment, with a careful maintenance of the warmth of the limb. Some advantage is also to be derived, on hydrostatic principles, by keeping the limb on an inclined plane; the upward venous circulation being thereby greatly facilitated. Although non-puerperal crural phlebitis has long been known, there are but few cases on record. The subject is noted at the greatest length by Dr. Lee in the *Encyclopædia of Practical Medicine*, in the article Phlegmasia Dolens; but it is only alluded to by Dr. Ramsbotham and other obstetric writers. In the cases mentioned by these writers, the venous inflammation appears to have commenced, as in the puerperal condition, in the uterine veins; as, in all these cases there was, as in the present case, antecedent suppression of the menses, doubtless accompanied by great uterine congestion; or there existed malignant disease of the uterus itself.

The disease has also been seen in the male subject, as a sequence of dysentery, hæmorrhoids, or cancer of the rectum; the hæmorrhoidal veins in these cases being the primary seat of the phlebitic inflammation. It has been also known to be one of the final symptoms of exhausting maladies of long duration, as phthisis; in these cases arising probably from simple coagulation of the blood, due to feeble circulation and the proportionate superabundance of fibrine which has existed in such instances. Of this coincidence I have met with several cases.

Of the pathological conditions which give rise to crural phlebitis, we are now well-advised; numerous post-mortem examinations, especially in puerperal cases, revealing inflammatory deposits in the several venous coats, causing such thickening as ultimately diminishes the calibre of the vessel to a size incompatible with the normal return of the venous blood. Hence arise congestion of the capillary veins and cellular exudations, which induce the enormous distension of the limb. The reabsorption of these deposits and the restoration of a free current in the femoral vein, is the point to be aimed at in the treatment; and to what extent it may be accomplished is well illustrated in the cases recorded.

ART. 72.—*Two Cases of Extensive Arterial Obstructions from Separated Cardiac Vegetations.*

By Dr. GOODFELLOW, Physician to the Middlesex Hospital, &c.

(*Proceedings of the Royal Medico-Chirurgical Society*, June 24, 1862.)

These cases speak for themselves. The extent to which the plugging took place, the number of vessels involved, the morbid changes in and around the coats of the vessels at the seat of obstruction, and the consequences which ensued, give a peculiar interest to them. In both cases vegetations of considerable size had formed on the mitral valve and surrounding surface of the endocardium. Some of these had become detached, and caused obstruction to the circulation in several of the large arterial trunks; coagula formed around them, and complete occlusion followed. The symptoms were well marked—namely, pain, intense and agonising, at the seat of obstruction, and coldness and numbness at the distal extremities of the affected limbs, speedily followed by gangrene. In the first case the evidences of occlusion were observed about a month before the fatal event, and about seven days prior to the appearance of gangrene. In the second case the interval between the evidence of obstruction and the appearance of dry gangrene was shorter; the pathological changes in and around the walls of the arteries at the seat of obstruction were less extensive.

CASE I.—The first case was that of a woman, aged 30, who had had an attack of acute rheumatism twelve years prior to her admission into the hospital. The heart was damaged during that attack. She, however, was enabled to follow her usual occupation, with occasional interruptions, up to a short period before the appearance of the symptoms denoting obstruction.

CASE II.—The second case was that of a girl, aged 17. She had had an attack of acute rheumatism about three years before, complicated with pneumonia, but not with heart affection. Another attack of rheumatism occurred about eighteen months afterwards, which was complicated with endocarditis. From the time of this attack to the period of her seizure with her last fatal illness she suffered considerably from dyspnoea and frequent and severe pain in the præcordial region.

(D) CONCERNING THE ALIMENTARY SYSTEM.

ART. 73.—*On the Treatment of Peritonitis by the continued Application of Cold to the Abdomen.*

By M. BÉHIER,

(*Gazette Hebdomadaire de Médecine et Chirurgie*, April 6, 1862.)

M. Béhier, at a meeting of the French Academy of Medicine, held 1st April, 1862, reported the histories of several cases of metro-peritonitis which were rapidly cured by the exclusive application of continuous irrigations of cold water upon the abdomen; and then detailed the results that have been obtained by him in the treatment of puerperal affection by the application of ice. M. Béhier

urine ranges from 1035 to 1045 or 1050. When it has undergone fermentation, and all the sugar is converted into alcohol and carbonic acid, the specific gravity is found to have sunk to 1009, to 1002, or even below 1000. This falling off in density arises from two distinct yet necessarily associated causes—namely, first, the destruction of the sugar, which was the cause of the high density of the original urine; and, secondly, the presence of the generated alcohol in the fermented product. Now, the loss of density from these causes must evidently stand proportional to the quantity of sugar originally present in the urine, and must consequently furnish a measure of its quantity.

Dr. Roberts proposes to call this mode of estimating sugar the *Clinical Method*, to distinguish it from the old fermentation method by flask and chloride-of-calcium tube, which is now abandoned for better processes.

The experimental facts on which the clinical method is based are fully detailed in a paper published in the “Memoirs of the Manchester Literary and Philosophical Society” for 1860; also in a paper in the *Edinburgh Monthly Journal* for October, 1861. The mode of proceeding was—first, to ascertain by the volumetrical analysis, how much sugar was contained in a certain diabetic urine. The urine was then fermented by means of German yeast, its specific gravity having been previously ascertained. In twenty-four hours after the fermentation had ceased and the scum had subsided, the density was taken again, and by subtracting this from the density before fermentation, the “density lost” was ascertained. And it was found that for every grain of sugar contained in an ounce of urine, one degree of specific gravity had been lost. Experiments were multiplied on diabetic urine; corresponding experiments were made with solutions of sugar of known strength in healthy non-saccharine urine, and in pure water, and the issue of all was to establish the conclusion, that the number of degrees of “density lost” indicated as many grains of sugar per fluid ounce. A couple of examples will afford the best illustration.

1. A diabetic urine having a specific gravity of 1053·48, was found by the volumetrical analysis to contain 11·36 per cent. of sugar, which is equal to 49·64 grains per ounce. After fermentation the density was reduced to 1004·48, so that the “density lost” was 49 degrees; and 49 grains (neglecting decimals) per fluid ounce occasioned a fall of 49 degrees of density.

2. In the second example the specific gravity was not so high.

Specific gravity before fermentation	1038·32
Sugar estimated by the volumetrical process	5·68 per cent.
Or per fluid ounce	24·82 grains.
Density after fermentation	1013·56
Density lost	24·76

In round numbers, 25 grains of sugar per ounce caused the density to decline 25 degrees.

For clinical purposes this is a most convenient basis of calculation. Having ascertained the quantity of sugar per ounce by the number

of degrees of density lost, the daily excretion of sugar is reached at once when the number of ounces of urine voided is known. If it is considered more convenient to estimate the sugar as so much per cent., the result of the experiment is obtained in this form by multiplying the "density lost" by the co-efficient 0.23. Thus, in the first of the quoted examples, the "density lost" was 49 degrees. This multiplied by 0.23, yields 11.27, which is the amount of sugar per 100 parts. Similarly, in the second example, $24.76 \times 0.23 = 5.69$.

In the practical application of the clinical method, the ordinary urinometer may be used for taking the densities; but it is well to choose one with a long scale, as some of those in use have very short ones, and it becomes impossible to read the density accurately. Still further precision may be attained by dividing the usual scale into two parts on separate instruments. Dr. Roberts has had constructed for his own use two perfectly corresponding hydrometers, on one of which the scale ranges from 995 to 1025, and on the other from 1025 to 1055, each instrument covering 30 degrees of density. The scales are thus rendered so long, and the intervals between the lines so great, that in a clear urine the specific gravity can be easily read to a quarter of a degree; and even in the fermented urine, which does not regain its original transparency, but continues, at least for many days, more or less cloudy, it can be read with certainty to half a degree.

Another important point is to obviate errors from variations of temperature. If the density before and after fermentation be taken at widely different temperatures, an error of serious amount may creep into the analysis. The best mode of avoiding this is to put up a few ounces of the unfermented urine in a "companion phial," and to place this side by side with that set apart for fermentation, so that, at whatever temperature the fermented product may be when its density is observed, its unchanged *alter ego* stands near it for comparison at exactly the same temperature.

The most convenient way of proceeding is as follows:—About four ounces of the saccharine urine are put into a twelve-ounce bottle, and a piece of German yeast about the size of a cobnut or small walnut is added to it. A great excess of yeast is used to hasten fermentation, but a little more or a little less does not sensibly affect the result. The bottle is then covered with a nicked cork (which permits the escape of the carbonic acid), and set aside on the mantelpiece or other warm place to ferment. Beside it is placed a tightly-corked four-ounce phial of the same urine without any yeast. In about twenty-four hours the fermentation will have ceased, and the scum cleared off or subsided. The fermented urine is then decanted into a cylindrical glass, and its specific gravity taken; at the same time, the density of the unfermented urine in the companion phial is observed, and the "density lost" ascertained. Fermentation is generally complete in about eighteen hours, if the locality is sufficiently warm; and it is desirable to remove the two phials into a cool place two or three hours before the densities are taken, in order that they may attain the temperature of the surrounding atmosphere.

The time actually consumed in determining the quantity of sugar in urine by the clinical method does not exceed four or five minutes, but the result must be waited for until the succeeding day; this is its chief disadvantage. Its application is so easy, that a medical friend, who was some time ago in attendance on a diabetic patient, was able to teach the patient's wife to make the analysis; every morning, when he came, she could give exact information as to the quantity of sugar excreted on the previous day.

In infirmary practice, Dr. Roberts is in the habit of instructing the nurse to put up the two phials as already explained—one for fermentation and the other for comparison. She removes them from the mantelpiece and deposits them in the ward a couple of hours before his arrival. All that devolves upon him to do is to take the two densities and ascertain the difference. In this way an exact record of the sugar passed by a diabetic patient may be kept, with no more trouble or expenditure of time than is usually bestowed in the ordinary examination of a patient suffering from serious disease.

ART. 87.—*On the Saccharine Treatment of Diabetes Mellitus.*

By Dr. JOHN HUGHES, Senior Physician to the Mater
Misericordiæ Hospital, Dublin.

Dr. Hughes relates four cases of diabetes mellitus which came under his care in hospital practice almost simultaneously, and in which he gave a trial of more than four months to the saccharine mode of treatment.

CASE I.—The first was a man named Thomas Ryan, aged 37, who had been diabetic for thirteen months before admission, and had been under treatment for his disease during the greater part of that time. On admission he was voiding, daily, eight pints of urine, specific gravity 1049, and containing 22 grains of sugar in each ounce. He complained of great thirst, languor, and debility: the skin and mucous membrane were dry; the bowels confined; and all the usual symptoms of diabetes were present.

I treated this man with Dover's powder and the vapour bath, for a fortnight, when he left the hospital relieved in respect to the condition of the skin and mucous membrane; his thirst was abated, and the skin was somewhat moist; the quantity of urine varied with the amount of fluid drunk, but its condition was unaltered. He thought he was growing weak, and wished to go home. He told me his father had a complaint similar to his own.

This man returned on the 18th of January, and was then voiding ten pints of urine daily, of a specific gravity 1041, 24 grains of sugar in each ounce. He said he drank a large quantity of beer, one day, at home, and was not as well since. I now determined to put him on the saccharine treatment, and ordered him six ounces of barley sugar daily; diet of fresh meat, with green vegetables and bread; also a moderate quantity of lime-water and milk. He continued this plan steadily for three weeks; and at the end of that period his condition was, to a certain extent, improved. The quantity of urine passed was seven pints, the specific gravity 1041; each ounce contained 24 grains of sugar; and he gained two pounds in

weight. The skin was somewhat moist, thirst abated. He was again anxious to return home, and left the hospital.

CASE II.—The second case was a man, aged 40; but as he was not in the hospital more than a week, and was treated with sudorifics (Dover's powder) alone, and almost an exclusively animal diet—I will not refer to his case. In fact, he would not submit to the abstinence from fluids and the variety of food which I enjoined. He left without any apparent change. There was one fact connected with him of interest—he told us his father had the same ailment he was labouring under, and died of it.

CASE III.—The next patient was a man aged 32 (John O'Neill), who suffered from the complaint for eighteen months before admission. On the 3d January he was voiding fifteen pints of urine, of a specific gravity 1043; 18 grains of sugar to the ounce. He was very thin, and had all the symptoms of diabetes in an aggravated form. He was treated with sugar and mixed diet, like the former patient; and at the end of six weeks his urine was reduced in quantity to six pints—the specific gravity remaining the same. All the other symptoms were greatly relieved, and he felt himself much better and stronger; in fact so well that he was anxious to go and resume his former employment (that of a shopman). Yet, on weighing him, we found he had lost four pounds in weight since his admission, and his urine contained 22 grains of sugar to the ounce. We heard that he since died of phthisis.

CASE IV.—The last and most interesting case is that of Henry M'Nee. He was a married man, 30 years of age; tall, well-proportioned, and of a very athletic frame. He was always temperate; had no hereditary predisposition to the disease, and attributes his illness to profuse perspirations and alternate chills while working as a railway labourer. Five years ago, when employed in England, he first noticed his disease, and was treated for it at the Manchester Infirmary. After four months' stay in that institution, he left at his own request, relieved sufficiently to resume his work, at which he continued for eleven months before admission. At that time he noticed the aggravation of his disorder, which set in with great thirst, increased flow of urine, general weakness, and rapid loss of flesh.

On admission, all those symptoms had attained a great intensity. He said he was only the skeleton of his former self; for, when in health, he weighed more than fourteen stone, and now he did not reach twelve; which surprised him, when he could eat so much—four times his ordinary quantity—and he did not feel sick, only very weak. He was voiding ten quarts of urine in twenty-four hours, of specific gravity 1049, and was obliged to empty the bladder every hour. He drinks about the same quantity of fluids within the same time. His urine has an acid reaction, is free from albumen, and each ounce contains 24 grains of sugar. As an evidence of his broken-down health we found a large, chronic, indolent ulcer over the right external ankle.

I was determined to give the saccharine treatment an uncomplicated trial in this case; and, after an aperient, I put the patient on six ounces of sugar, daily, together with four ounces of treacle; bread, meat, and green vegetables for diet; lime-water and milk for drink—with an injunction to limit the amount as much as possible.

At the end of a month he was somewhat improved. He had gained two pounds in weight; his thirst and appetite were diminished; the quantity of urine passed in twenty-four hours was reduced from ten to seven quarts; the specific gravity ranged from 1043 to 1045—26 grains of sugar to the ounce.

During the next month he had two attacks of sudden and violent sickness of stomach, accompanied with constant vomiting and cramps in the abdomen and legs. He complained, for a few days, of great nausea, and felt as if saturated with sugar; everything, he said, tasted sweet. He was, at the same time, weak. The urine was of a specific gravity of 1044—not lessened in quantity. The ulcer of leg was healed. The sugar treatment was discontinued.

After the lapse of a few days the sugar was again resumed; and his condition at the end of another month was as follows: His weight, 12 stone 11 lbs.; consequently he had gained nine pounds since last report. His urine is reduced to three quarts in twenty-four hours; and he is not disturbed more than once or twice to pass it during the night. His skin is moist; his bowels are regular; he has gained strength, for he is able to work at the force-pump of the hospital for an hour without resting. The specific gravity of the urine is 1035-9, but it contains a *greater amount* of sugar than before. According to Garrod's glucometer each ounce contains 40 grains of sugar. His appetite and thirst have decreased; the ulcer of the leg has broken out again.

After four months' stay, he left the hospital in the month of May, and obtained employment as a porter, which obliged him to carry considerable weights; he remained at this work for six months, during which time I saw him occasionally; but at the end of that period he was completely prostrate, and sought relief in another hospital. As the sequel of his case has been published, I will add some extracts from the report:—

He was admitted into Dunn's Hospital, under the care of Professor Law, in the month of January, and was then voiding sixteen pints of urine in twenty-four hours—specific gravity 1042. On the 10th of February the quantity of urine was twelve pints—specific gravity 1035-9, and contained 8750 grains of sugar, or about 45½ grains to an ounce. On the 8th of March the quantity of sugar was 39 grains to the ounce, the amount voided being the same. On the 20th March the quantity of sugar declined to 34 grains; and on the 8th May the urine was reduced to ten pints; there were 38 grains of sugar in each ounce.

He left the hospital in July; but was again readmitted in October, in an advanced state of phthisis; and on the 10th November the *post-mortem* examination showed extensive tubercular disease in both lungs. "Both kidneys were very large; one weighed 12½ ounces, the other 11. Both were much congested, but exhibited no trace of disease or deviation from their normal structure. The liver was perfectly normal in size and appearance: and, on examination, did not contain a trace of sugar. It was, in fact, to the eye and to chemical analysis a specimen of a healthy liver."

"It will be seen from these cases, in which the saccharine treatment has had a pretty fair trial," says Dr. Hughes, "that, to say the least, it produced no permanent improvement. The specific gravity of the urine was not altered, and in each instance its saccharine quality was aggravated. 'Tis true the amount of urine voided within a given period was considerably diminished; but I think that result is very much within the control of the patient, exclusive of medicine. I mean, of course, if he checks his desire for fluids. The gain in weight and the increased strength may be more justly attributed to other causes than to the amount of sugar taken; and I am quite satisfied, so far as my observation enables me to judge, that the saccharine treatment of diabetes is not entitled to the credit which its advocates claim for it. All that can be said

for it is, that it is vastly agreeable to patients, and is not positively injurious, as one might *à priori* be inclined to suppose."

ART. 88.—*The Treatment of Diabetes with Sugar.*

By M. RIGODIN.

(*Gazette Hebdomadaire*, Juillet 11, 1861.)

M. Rigodin has reported a case in which an apparent cure of diabetes was effected by the use of sugar. The quantity employed daily was as much as would strongly sweeten three cups of coffee. The reviewer in the *Gazette* remarks on the small quantity of sugar used, and on the absence of any direct statement which proves that the case was anything more than simple polyuria without sugar in the urine. On the general question of the efficacy of a sugary diet, he remarks that, supposing M. Claude Bernard's theory of the glycogenic function of the liver to be correct, it is difficult to imagine how adding more sugar to a system in which it is already produced in excess could be beneficial. Probably in those cases where sugar has appeared to do good, the generous diet, quinine, and cod-liver oil, which were simultaneously prescribed, produced the improvement observed, while the sugar did little or no harm.

ART. 89.—*A Case of Chylous Urine successfully treated by Tincture of Muriate of Iron.*

By Mr. G. C. DUTT, Superintendent of the Bhowanipore Government Dispensary.

(*Lancet*, July 26, 1862.)

CASE.—Sh'aghur, a male Hindoo, aged twenty-four years, became an out-patient of the Bhowanipore Dispensary on the 25th of April last. He reported himself to have been suffering from chylous urine for four years, during which time he had been under several practitioners, and had taken a variety of medicines, but with very little benefit. As a last trial he came to me. On examining a specimen of his urine, it was found to be of a milky-white colour, thick, and full of coagula. There was no pinkish tinge in it. I am sorry to say I did not examine it for sugar. The patient stated that at the commencement he had slight pain in the region of the right kidney; but that it was removed by a blister, which, however, did not produce any effect on his morbid urine. He was dyspeptic; but his general health was good, and there was no evidence of any visceral disease or any local affection of the lymphatic system. He had a slight attack of intermittent fever while under my treatment, and which was cured by a few doses of quinine. The peculiarities of this case were that the urine passed during the day was clear and free from chyle, while that voided during the night and in the morning was deeply loaded with it. At night micturition was frequent, and the urethra would sometimes get blocked up by coagula. He was very much subject to night emissions.

I treated him at first for dyspepsia, which did nothing more than improve his appetite. For this purpose I gave him tonics, antacids, &c. I then tried gallic acid, in three-grain doses, three times a day, for five days; but

with no better success. In fact, the symptoms were aggravated while under this treatment. I then resolved to try some preparations of iron, and accordingly ordered him fifteen minims of tincture of muriate of iron, in an ounce of infusion of quassia, to be taken three times a day. Before he had taken the medicine for three days the improvement in his urine was marked, and at the end of the week it was entirely free from chyle. I kept him under observation for more than four weeks after this, and intermitted the use of the drug for a week, and am happy to say that his urine continued free from chyle. He was discharged on the 6th of June as cured.

ART. 90.—*A Case of Chylous Urine.*

By Dr. WARBURTON BEGBIE, Physician to the Royal Infirmary at Edinburgh.

(*Edinburgh Medical Journal*, August, 1862.)

CASE.—T. R., born on the 5th of January 1834, at Meerut, in the East Indies. Arrived in Scotland in 1838, and has continued ever since to reside in this country. Since 1847 has followed the occupation of a shoemaker. Till 1850 enjoyed good health, but in that year became subject to derangement of the stomach and bowels, and began to suffer very frequently from severe headaches. Shortly after this he acquired great irregularity in his habits, taking whisky to excess, being often drunk, and in consequence much exposed to cold and wet. In 1855, had a long-continued attack of gonorrhœa, and thereafter suffered greatly from weakness in the back and limbs. After the gonorrhœa, he first observed the urine to be altered in colour, usually white in appearance, though passed without any pain or uneasiness. Such continued to be the character of the urine till June, 1857, when it became much thicker, having at times the consistence of curds when it was passed. This thickness of the urine lasted for a few days together, and was again succeeded by a discharge of the white and thin urine; when the thick water was voided there was always more or less of pain, and frequently very great suffering. In June, 1857, he again contracted gonorrhœa, and in the following month had an inflammation in the left eye. During this year he frequently noticed that the urine, after standing a short time, became quite firm. In January, 1858, states that on one occasion he suffered from retention of urine for several hours, but that the attack was relieved by the passage of a dense substance very similar in size and appearance to an oyster. During 1859 and the two following years his habits have been somewhat steadier, and he has suffered less pain in the back, and only occasionally from uneasiness or difficulty in voiding the urine. Came to Edinburgh in December, 1861, and commenced work, but owing to general weakness had soon to abandon it. It was at this time that he was seen by my friend Mr. Traquair, and recommended to apply for admission to the Infirmary. The patient is short in stature, and has a somewhat sallow and unhealthy appearance. There is no emaciation, but the muscular development of body and limbs is feeble. Complains of a nearly constant sense of weight and often of dull pain in the lumbar region. This is relieved rather than aggravated by pressure. The appetite is good, tongue clean, pulse normal, skin rather dry; suffers from thirst, and generally confined bowels.

The patient continued under observation in the Infirmary for several weeks, during which time the appearance of the urine varied very greatly, and frequently from day to day. At one time there was scarcely more than an opalescence, at another the urine was very thick and milky, but whether

slightly or highly chylous, always rendered clear upon being treated with sulphuric ether. After exposure for a short time in glass vessels, a whitish sediment, varying in amount in different specimens, but at no time very copious, was deposited. Different specimens of urine were subjected to careful chemical analysis, and, as has previously happened in similar cases, with very different results as respects the amount of fatty matters present. Dr. Murray Thompson found in one sample the amount of fat per 1000 grains to be 2·075, and in another only 0·76 was discovered; both were the urines of the forenoon, passed shortly after the hospital morning meal of tea and bread. Mr. Arthur Gamgee found in one specimen of very milky urine the amount of fat as high as 10·32 in 1000 parts. The following is the result of a more detailed analysis by the same gentleman; the sample of urine in this instance was by no means so chylous in appearance as that portion which rendered the former result:—

Quantity of urine passed in 24 hours	41 ounces.
Specific gravity, 1·020; reaction, acid.	
Water in 1000 parts	965·90
Urea	10·15
Uric acid and vesical mucus	1·52
Animal, extractive, and ammoniacal salts	6·02
Albumen	1·70
Fat	2·00
Fixed alkaline and earthy salts	12·71

On the application of heat, and on the addition of nitric acid or of nitro-hydrochloric acid to this patient's urine, a very partial coagulation always occurred; the degree varied considerably in different specimens and on different days, but was never great. Microscopic examination revealed the presence of blood corpuscles, few in number, and of fatty matter in large amount, the latter always in the condition of so-called molecular division. On one or two occasions my house-physician, Dr. James Grant, called attention to the presence of a very few oil globules; such were always easily produced by the previous addition to the urine of a few drops of sulphuric ether. Besides these ingredients there existed a good deal of bladder epithelium, and in nearly every specimen examined, a number of distinct fibres. The latter abounded in such urine as after standing for a short time exhibited small coagula, sometimes coloured pink, at other times colourless; consisting of the spontaneously coagulable ingredient in chylous urine, namely, fibrine. Casts of the renal tubules were never found. Only on one occasion while the patient was under our observation did the urine acquire, after standing a couple of hours, in part the consistence of "blancmanger."

"In the case of this patient," says Dr. Begbie, "as of others previously described by different observers, the chylous condition of the urine could be readily increased or diminished at will. Rest operated very strongly in determining a diminution of the fat and albumen, while a brisk walk, or even moving about in the ward, on the other hand, as powerfully increased both. The patient maintained that stimulants lessened the milky appearance of the urine, but, with the exception of a limited allowance of gin, under which the urine was for several days clearer, we determined that they really increased it. Many remedies were administered, but with very little benefit. Gallic acid, which Dr. Bence Jones has found most useful, failed to effect any change; the salts of iron seemed

more serviceable, particularly the persesqui-nitrate. A proper regulation of diet I consider to be of most consequence; for although an increase of the chylous condition of the urine was observable after partaking of all kinds of food, and after every meal, even when rest had been previously indulged in for a considerable time, yet the use of such articles of diet as caused a feeling of indigestion, speedily and seriously increased the morbid state of the urine.

"In this patient's case there is no reason to apprehend the existence of organic renal disease.

"The affection is undoubtedly an obscure one. This much may be considered as ascertained, that in all cases of chylous urine, occurring of course to a much greater extent in some than in others, the abnormal constituents of that fluid, the fatty matter, the albumen, and fibrine with blood globules, when they occur, are diverted from their proper channel and being removed at the kidneys—whether owing to change in the lymphatics of these organs, or in their capillaries, is not known—prevent the due nutrition of the system, to which they are properly subservient. The debility and cachectic appearance soon manifested by some sufferers, and the look of indifferent health which before long all more or less acquire, confirm this view. I may mention that the patient whose case I have related is at present engaged in his old occupation, and is freer from pain and inconvenience than for some time past."

ART. 91.—*The Symptoms of Atrophy of the Kidneys.*

By Dr. C. METTENHEIMER.

(Schmidt, No. 9, 1862.)

Mettenheimer gives the following as the diagnostic symptoms of kidney-atrophy and dropsy, of which ascites is not the most prominent feature, alternating with polyuria, and bearing a certain relation of time and degree to the latter; urine clear and nearly odourless, never with blood or tube casts, except at those times (if they ever occur) when albumen is also present; impediments to the circulation, weakness of the heart, pericarditis, extreme dyspnoea, asthma, orthopnoea, oedema of the lungs; finally, lasting dyspepsia, and, in young women, invincible amenorrhœa.

ART. 92.—*Discharge of a Portion of Kidney per Urethram.*

By Mr. H. TAYLOR.

(*Archives of Medicine*, vol. ii. p. 284.)

CASE.—A boy, eleven years old, who had suffered from scarlet fever six months before, had felt indisposed for some time, and complained of pain in the belly, especially in the left side in the course of the ureter. The urine was scanty, but often passed, and frequently contained pus, but no blood. One day, during urination, a sudden stoppage occurred, and after much straining, a roundish body, weighing about twenty grains, was passed.

This was soft, pulpy, irregular in shape, and of greyish colour : under the microscope it proved to be indubitably a piece of cortical kidney substance. The pain was now much less, and continued so till thirty hours before the patient's death, when severe abdominal pain set in again, requiring the use of opium. The appetite failed entirely, and death occurred from exhaustion. Post-mortem examination showed the whole parietal peritoneum much thickened, and both kidneys united to the surrounding organs by old adhesions. At the point of contact of the right kidney and colon, an opening was found, by which pus passed from the kidney into the bowel. The ureter, pelvis, and calices on both sides were considerably enlarged, the kidney itself dilated, its tissue soft and suppurating in some points ; here and there were small loose fragments, exactly resembling that which had been voided per urethram.

ART. 93.—*Enormous Diverticulum of the Bladder.*

By Drs. W. WARREN and GREENE.

(*American Medical Times*, N.S. iv. 13 ; *Schmidt*, No. 8, 1862.)

CASE.—A man, 85 years of age, who had suffered from dysuria for about six years, had a fall, in which he struck his perineum, after which the difficulty in passing water increased : however, for a long time no catheter was introduced, as urination never became quite impossible. The belly enlarged as much as in ascites, but the swelling was distinguishable from that, because on the right of the symphysis pubis and stretching up between the navel and the spina ischii was a marked depression of the breadth of a finger ; on the left side the swelling was uniform, and here there was a sense of fluctuation, and percussion gave an evenly dull sound. Palpation of the right iliac fossa detected a deep-seated tumour free from the abdominal wall, and fluctuating ; and if pressure were applied alternately to it and the tumour on the left side of the belly, fluid appeared to pass from the one to the other. The prostate was examined *per rectum*, and found to be much enlarged. Catheterisation was quite easy, but evacuated only a cupfull of urine : the instrument immediately after entering the bladder encountered a resistance ; it was pushed a little further in towards the right side, but no more urine was obtained. The diagnosis was that of a cyst with a small orifice of communication which was kept closed by the pressure of the bladder ; and it was supposed that this might be of hydatid origin. Dysuria at length became complete, and the patient sank exhausted. At the post-mortem examination, it was discovered that the urine was dribbling away, and that an increased quantity could be made to flow by pressing the left side. On opening the belly a tumour was seen, reaching up to the stomach, and pushing the intestines up into the hollow of the diaphragm, its wall being united with the parietal peritoneum. *The tumour on the right side was the bladder*, whose walls were greatly hypertrophied ; in its left wall, four centimetres above the neck, was a large round opening which led into the larger tumour ; the latter consisted of the mucous and peritoneal coats of the bladder, and contained a gallon of urine. No doubt the course of events was this :—
1. Enlargement of the prostate with consequent dysuria and hypertrophy of the muscular coat of the bladder. 2. At the time of the fall, rupture of the muscular coat from shock, and consequent distension of the mucous and peritoneal coats into a cyst.

ART. 94.—*On a Singular Lesion of the Urinary Bladder.*

By Dr. PACKARD.

(Dublin Medical Press, October 1, 1862.)

At a recent meeting of the Pathological Society of Philadelphia, Dr. Packard exhibited the right lung and the bladder of a man, aged 25, who died in the Christian-street Military Hospital, of pleuro-pneumonia following measles. An immense effusion of turbid serum, full of flakes and shreds of yellow lymph, distended the right pleura and compressed the lung. The two layers of the pleura adhered to one another by means of soft yellow lymph over a space about as large as the palm of the hand, at the side. Spots of congestion, amounting almost to extravasation, were scattered here and there through the lung tissue. The mucous membrane of the trachea and bronchi was deeply reddened, and the bronchial glands much swollen. Nothing abnormal was noticed in the left lung.

All the cavities of the heart were distended with black blood, partly fluid, and partly in soft currant-jelly like clots; on cutting into the ventricles the mass was squeezed up into the incision. Within the pericardium there was a small quantity of turbid serum, but no inflammation of the membrane could be detected. The liver was rather large and fatty, the spleen soft and pale. The pancreas was so soft as to be easily torn, but was rather injected than otherwise. The kidneys were pale. On laying open the urinary bladder, which was contracted into a very small space, there were noticed on its floor several elevations, of various shapes, one crest-like, another broad and flattened, but all presenting an intensely red colour, as if inflamed, and one or two looking as if ulcerated. The rest of the mucous membrane was perfectly smooth and pale, but a large portion of the surface of the urethra was deeply congested.

Dr. Packard exhibited a urinary bladder presenting a curious analogy to that in the foregoing case, from a man who died of pneumonia supervening upon measles, in the Christian-street Military Hospital. The right lung was intensely congested throughout, carnified and breaking down easily under the finger or by tearing, at the lower part. Its pleura was universally adherent. The bronchial glands were greatly enlarged. Left lung healthy. The heart was normal, containing rather more than the usual amount of firm white clot. The liver was large and slightly fatty; the spleen quite soft. The kidneys were congested; the supra-renal capsules normal. The urinary bladder was very small. Being laid open, its mucous membrane was found pale and smooth, except at two points posterior to the orifices of the ureters, where there existed deep-red, smooth patches, looking like blood-clots. One of these patches was more prominent than the other; the mucous membrane was entire over both of them.

ART. 95.—*Sterility in Men.*

By Dr. HIRTZ.

(Schmidt, No. 9, 1862.)

Hirtz has frequently observed that men who in early life suffered from blennorrhœa and orchitis, although of good constitution and without syphilitic taint, and having the power of repeated copulation, were sterile. Microscopic examination of their semen showed a great deficiency of spermatozoa; and it was remarked that the patients were always unconscious of the seminal discharge. Hirtz calls this affection "idiopathic sterility;" he narrates, also, a different case, in which a man, who was well able to copulate, never experienced a discharge of semen during the act, but the urine passed immediately after connexion was found to contain many spermatozoa. At length, on one occasion during connexion, the patient felt a sudden pain followed by an ejaculation, and considerable hæmorrhage; and this connexion proved to be a fruitful one. It is probable that in this case there was some mechanical obstacle to the escape of the semen into the urethra, as there was a history of former severe blennorrhœa.

(F) CONCERNING THE CUTANEOUS SYSTEM.

ART. 96.—*A Fact as to the Contagion of Erysipelas.*

By Mr. —.

(Medical Times and Gazette, May 3, 1862.)

On April 1, 1862, a young girl was admitted into one of our metropolitan hospitals on account of necrosis of part of one femur, two or three sinuses existing. Her general health was pretty good. Ten days after her admission she became feverish, and erysipelas showed itself about the sinuses. The erysipelas subsequently spread, and involved the whole leg and thigh. The surgeon under whose care the child was now made inquiries, and ascertained the following facts:—On March 15, one of the physicians of the hospital admitted a case of idiopathic erysipelas of the face, and his patient (a girl of fourteen) was placed in the same bed that the second one was subsequently allowed to occupy. This case was a slight one, and the girl left the hospital in a few days quite well. The nurse admitted that the blankets of the bed had not been changed.

No other cases of erysipelas were in the hospital at the time, nor had any occurred in that ward for many months previously.

This case, which is related in the hospital notes of the week, shows in a strong light the danger of exposing patients with open wounds to risk of the contagion of erysipelas. It is to be remembered that the disease was idiopathic and very mild in the first patient, and that a period of several days had elapsed between the date of her discharge and the occupancy of her bed by the second one. The latter, moreover, did not sicken until ten days after her admission.

ART. 97.—*On Herpes, especially with Reference to its
Connexion with Affections of the Nervous System.*

By Dr. VON BARENSPRUNG.

(*Annalen des Charité-Krankenhauses zur Berlin*, Bd. ix. Ht. 2, 1861, and
Medico-Chirurgical Review, January, 1862.)

In considering the topography of the disease, bearing in mind its dependence upon derangements of internal organs, the author shows that the eruption follows the course of various nerves, and commences the description of each variety (which we shall not dwell upon) by giving what he terms the type of the variety in question. Thus, the zoster facialis, limited to one side of the face, corresponds to the cutaneous and mucous twigs of the trigeminal nerve; the labial form being restricted to the labial branch of this nerve. The occipito-collaris subdivision corresponds to the peripheric distribution of the third cervical nerve; the cervico-subclavicularis subdivision to that of the fourth cervical nerve; the cervico-brachialis to that of the cervical and dorsal nerves, which are united to form the brachial plexus; the dorso-pectoralis to that of the third, fourth, fifth, sixth, and seventh thoracic nerves; the dorso-lumbar to that of the eighth, ninth, tenth, eleventh, and twelfth thoracic nerves; the lumbo-inguinal form to that of the first lumbar nerve and the twelfth intercostal, which anastomoses with it; the lumbo-femoral form with that of the second, third, and fourth lumbar nerves, involving specially the anterior and external cutaneous, the genito-crural, obturator, and crural nerves; the sacro-ischiadic form with that of the anterior branches of the sacral nerves, which unite with the two last lumbar nerves and the sympathetic, forming the sacral plexuses from which the pudendal, great posterior, cutaneous, and ischiadic nerves (those herein implicated) proceed.

In discussing the symptoms, separate consideration is made of the accompanying fever, the inflammation of the skin, the pain, neuralgia, and other indications of nerve-irritation, the gastric symptoms, and the condition of the urine and of the blood; reference being made to the observations of Rayer on the presence of fat in the blood in these cases; and of Keller, who found* that in this disease there was great increase of the chlorides, especially chloride of sodium and phosphoric acid salts, with diminution of the sulphates and urates; also much of the ammoniacal compounds, and fat. The author, however, states that he has been unable to find any remarkable changes in the constitution of the urine in his cases.

The ætiology of the disease is considered at some length, and it is determined that in the skin-inflammation, possessing, as it does, a typical form and course, and limited to the peripheric distribution of certain cerebral and spinal nerves or their branches, the source of inflammation is not from without, nor in the blood, but that it operates through the nerves, and in fact depends upon their abnormal

* *Archiv. f. Physiol. u. Path. Chemie.* 1850.

irritation. It becomes necessary to inquire of what nature it may be, and at what part does this irritation occur. It cannot have a central origin, for the zoster always follows the track of one or two nerves, and is almost always confined to one side of the body. It cannot spring from cerebral sources, for then it would be frequently extended to the whole of one half of the body; nor from the spinal marrow, for then would it be as a rule symmetrical. Now in all completely developed cases the anterior and posterior roots are contemporaneously affected, consequently the excitement of the spinal nerves must occur before their exit from the intervertebral foramina, and we must now locate the point of irritation in the roots of the spinal nerves. Still the question remains, which is the root affected? And it is resolved that it must be the posterior one, because in this disease all motor influences are unaffected, and inasmuch as the affection is so frequently associated with exalted sensibility. Allusion is then made to the fact, that sensitive nerve-fibres often not only convey their specific activity, but also a nutritive one; and illustrations are drawn from the co-existence of redness of the skin in neuralgia, and injection of the eyes, with increased flow of tears, saliva, &c., in neuralgia of the trigeminal nerve; and reference made at length to the established occurrence of sympathetic fibres in cerebro-spinal nerves, owing to their communication with ganglia, by which these ganglia preside, as it were, over the trophic conditions of special organs. Where, then, it is asked, are these fibres which proceed to the surface of the body, whose morbid excitement produces the remarkable phenomenon of herpetic eruptions? The place has already been pointed out—viz., the posterior roots of the spinal nerves; and it is to the spinal ganglia which are connected with these roots that we must look for an explanation of the phenomenon under consideration. The sensitive nerve-fibres are described by Kölliker and others as passing through spinal ganglia without being intimately connected with them; whilst the ganglion-fibres arising in the ganglion-masses do not extend towards the spinal cord, but take a peripheric course along the sensitive fibres. Hence arises the neuralgia so common in zoster by a propagation of irritation from the ganglion to the corresponding posterior roots, and thus the latter may propagate their irritated condition through the spinal cord to neighbouring and symmetric nerve-regions; whilst the trophic irritation always remains on one side, because the ganglion sends no fibres to the spinal cord or receives any from it. One or two cases are quoted bearing on the question, and one is specially worthy of observation, in which intense pain at the posterior part of the whole leg, and the formation of numerous groups of vesicles with reddish-yellow contents, of various sizes, was supposed to be owing to an œdematous and hyperhæmic state of the ischiatic nerve as found after death connected with psoas abscess. Cases are also quoted showing that a peripheric irritation of a nerve containing ganglion fibres may cause a limited eruption of herpetic vesicles.

ART. 98.—*On Eczema.*

By Dr. C. HANDFIELD JONES, Physician to St. Mary's Hospital.

(British Medical Journal, May 10, 1862.)

Eczema is so common and so well marked an affection, that it always appears worthy of careful consideration, as likely to afford to the inquirer some sound basis for a true pathology of this class of disorder. The generally received view of the nature of skin-diseases regards them as eliminative efforts of the system, and as resulting from the presence of some poison or *materies morbi* in the circulating blood. Even our patients console themselves with the thought that the eruption "is better out than in;" and look very mistrustfully at you if you do not cordially assent. The analogy of the exanthemata and of syphilis are the principal arguments in support of this theory. No direct evidence has, however, yet been adduced to prove it, such as inoculability, or the detection of the supposed *materies morbi*. It is quite possible this view may be correct; but Dr. Jones thinks it may be worth while to compare it with others which may be proposed, and to consider which accords best with the observed phenomena.

Now, in eczema, we have hyperæmia, and more or less actual inflammation of skin with detachment of epidermis, and exudation of albuminoid liquid. The inflammatory action may be sthenic or asthenic, according to the greater or less irritability of the tissue. What a close correspondence there is between this state and catarrhal affection of the mucous membranes, it seems scarcely needful to point out. In both cases, a cell-bearing tegumentary surface is inflamed, and continually throws off immature epithelium, and other corpuscles which we denominate by the epithet of pus or mucus. The majority of cases of eczema (and impetigo) correspond most to chronic catarrh; but there are a few in which the eruption coincided with recent bronchial or intestinal irritation so markedly, that the idea was necessarily suggested that the mucous and cutaneous disorder had the same origin, and were of the same nature. Now, though we often speak of influenzal poison, or speculate on catarrh being caused by some *materies morbi*, as suppressed perspiration, in the blood, there is no question but that practically we take small account of such views. We know we have to deal with an inflammation, more or less acute or sthenic, or the reverse; and we employ the measures which we find to be appropriate to such a pathological condition as we judge to exist. If there be sthenic disorder, we have recourse to antiphlogistic treatment; if asthenic to stimulant; and if, as commonly happens, the state is intermediate, we trim between the two as well as we can. We do not set ourselves to sweep the poison out of the system by sweating, or purging, or diuresis. We may use these means to some extent to equalise disturbances in the circulation, as Virchow has it; but not with any direct eliminant intention. As the local disorder subsides, the various secretions will doubtless be increased; but they cannot be forced prematurely with any advantage, and especially in asthenic affections they may

be profuse when the disorder is at its height. In the management of eczema, and various other kindred eruptions, we do just the same. We have no specific treatment; we have no thought of giving arsenic always and in all cases; but we shape our course according to the grade and character of the inflammation. In both cases, it seems we come to this: that, therapeutically, we do not consider either catarrh or eczema to result from poison in the blood; or, at least, if this poison be there, we are content to let it remain, perhaps the more as we know no means for getting rid of it. In truth, we act, however we may theorise, as dynamists, and not as humoralists. If either inner or outer tegument be inflamed sthenically, we let blood, or purge, or give salines, or antimony, &c., with the view of diminishing the stress of the blood-current in the inflamed part and the tissue-irritation. If the inflammation be asthenic, we give tonic remedies, which probably act by contracting the smaller arteries, and lessening the permeability of the capillary walls. In neither case do we distinctly aim at elimination. We regard the actions of the affected part, of its tissue, or its vaso-motor nerves, as having got in some way deranged, and we simply endeavour to restore them. Now, we may fairly say (regard being always had to the natural course of disease) that the proof of a mode of treatment being correct is its success; and thus Dr. C. H. Jones thinks that our daily experience furnishes very considerable proof that the commonest inflammation of the skin and mucous membranes are by no means necessarily the results of blood-poisoning, or have much claim to be viewed as eliminative efforts.

The neuropathic theory seems to our author quite as probable as the poison one, as much supported by facts, and more consonant with the results of therapeutic procedure. It is a matter of certainty that irritation in one part may set up inflammation in another, acting through the medium of trophic nerves. Direct irritation of nerves is also capable of producing severe inflammation in the parts to which they are distributed, which may even take the form of groups of vesicles. (Bärensprung, On Herpes. *Annalen des Char.-Krankenh.*, vol. ix., part 2, page 40.) Paralysis of vaso-motor nerves is also capable of giving rise to severe inflammation (Bernard's "Lectures," and the author in *Lancet*, July 21 and 28, 1855); though this is probably, in most cases, more of an asthenic character. This paralysis may be induced by inhibitory agency (author in *British Medical Journal*, Feb. 5th, 1859); that is to say, a morbid impression communicated from some surface or part is transmitted to the nervous centre, where it produces some change which prevents the transmission of motor impulses along one or more nerves implanted there. The morbid impression may be temporary, but its effects may be more enduring. Again, irritation may be reflected in the same way along trophic nerves (as just stated), and produce inflammation by the "disturbed plasturgic force of the nervous system." (Paget.) In all these cases, there is no doubt that the dynamic state of the tissues is often of as much importance as the presence of the irritant. One system is morbidly affected by that which another is impassive to. Different systems are affected differ-

ently by the same *causa mali*. In one case an irritation, say exposure to wet and cold, will affect cerebro-spinal nerves, and cause paralysis of voluntary muscles. In another, it will be reflected on vaso-motor nerves, and cause their paresis and its quasi-inflammatory results. In another, again, the irritation may affect the trophic nerves, and inflame the tissue they supply.

It must be added that it seems by no means unreasonable to admit that a tissue of any kind may have its nutrition disordered or enfeebled simply by an error or failure of its vital power. What else can we say when a fatty tumour, a fibrous, a colloid, or encephaloid, grows up in any part, or when an ovary rushes into some huge anomalous development? Is it not very conceivable that a sympathetic nerve may fail in its nutrition for a greater or less extent, lose its functional power, and that the well known consequences of such paresis should then ensue? What is scrofulous ophthalmia but a retinal hyperæsthesia, which originates, for the most part, in general debility? Mere mental depression will give rise to scurvy (*American Medical Times*, June 1st, 1861), which implies considerable impairment of the texture of the capillaries.

The blood is the normal excitant of the tissues; muscles deprived of it are paralysed, though we know, from observation of an amputated limb, that their contractility does not immediately cease. Is it not very conceivable that the blood may irritate parts, not because it is itself unhealthy, but because the tissue has become unduly irritable? It is quite certain that the same part, say the skin, in different individuals, differs much in proneness to irritation; in some being very susceptible, in others the reverse. May not a change of this kind occur in the same individual, a part of previously normal susceptibility becoming unduly irritable? Dr. C. H. Jones is much disposed to think that changes of this kind take place in the shifting inflammations of asthenic gout and rheumatism. The blood remains in the same state, contains the same *materies morbi*; but the state of the tissues alters in accordance with varying nervous influence. Thus, as pains "fly about," so do the inflammatory disorders, as being dependent for their locality on this uncertain factor.

Vanzetti's experiments, by compressing the artery of an inflamed limb, seem to show clearly that blood acts as an irritant to an inflamed part; and that, if it be excluded for some hours, the inflammatory phenomena cease. This surely indicates that the tissue may initiate the process. The importance of the state of the tissues, especially of the nervous, is shown very strikingly by the history of cases of syphilis and ague; as long as the general health is vigorous, the poison remains latent in the system, but reappears and reasserts its potency when the health gives way.

Lastly, admitting, as our author is rather inclined to do, that there may be some unhealthy state of the blood in eczema and other skin-eruptions, it by no means follows that we are to conceive of this as consisting in a definite and separable poisonous matter being dissolved in the blood, and exciting eliminatory efforts in various parts. On the contrary, all that the facts on this supposition can warrant is, that the morbid blood disorders the nutrition of the

tissues. Of eliminatory action, Dr. C. H. Jones sees not one tittle of proof. If the blood be so far abnormal as to cause morbid phenomena, it is certainly most probable that its whole organic matter, is in fault, and that what is wanted is not elimination, but improvement or renovation of the fluid by the various processes concerned in nutrition.

Besides the invariably necessary distinction of sthenic and asthenic eczema, there is only one variety which seems to be practically worth some notice; viz., eczema figuratum. The name sufficiently describes its visible character; but it is to be mentioned that it is decidedly more prone to relapse, and requires larger doses of arsenic than diffuse eczema. It occurs on the face, arms, and legs. Eczema rubrum and eczema impetiginodes are simply more intense, and usually sthenic forms of the disease.

Eczema, like all other disorders, is more difficult of cure in the old than in the young; but the principles of treatment in both are the same. With regard to its acting as a "safety-valve" to the system, which must not be removed without establishing some equivalent, as Mr. E. Wilson teaches, in the great majority of cases there seems to be no ground whatever for the notion. If, indeed, a person were manifestly plethoric, addicted to excess, liable to cerebral determination of blood, or to any other serious ailment, Dr. C. H. Jones thinks it prudent, either simply to moderate the eruption, giving an occasional purge, or to regulate the diet and mode of life, diminish the mass of blood if necessary, and then cure the disease.

With regard to the treatment of eczema, there seem to be marvellous discrepancies between our own practice and that of our German brethren. Most persons agree in the main with the principles so well and lucidly laid down fifteen years ago by Mr. Hunt; viz., first to reduce sthenic inflammatory excitement if it exists, and then to give arsenic so as to produce a decided effect on the system, which is usually evidenced by some conjunctivitis. But hear Hebra. Local treatment is the chief thing to be attended to; in no case must internal treatment be used alone; for as long as the itching lasts the patients will scratch themselves, and make the state of the skin worse. Arsenic is the only internal remedy which has any curative effect; and it must be given in large doses, which are liable to cause suspicious accidents. Purgatives are injurious, cod-liver oil useless. Various, more or less caustic, external applications seem to be his chief resources. He tried at first concentrated mineral acids; but "*abgesehen von der heftigen Schmerzen, entsprachen die Ergebnisse nicht.*" He then resorted to alkalies, which he still uses, in solutions of various strengths, the most concentrated containing a drachm of caustic potash to two drachms of water! *Schmier-soap*, potash-glycerine, and solution of two grains of bichloride of mercury in an ounce of water, are also used. After clearing away the crusts and scabs, if the affected part be infiltrated and thickened, he applies the above alkaline caustics, which are to be perseveringly used as long as they produce a pretty strong reaction of the morbid surface; viz., excoriations, red pimples, and vesicles. When the

reaction ceases, he resorts to tar diluted with alcohol, to oleum fagi, *huile de cade*, or to ointments containing the usual preparation of mercury, zinc, or lead. "In cases of relapse, which are by no means of rare occurrence, the whole treatment must immediately be gone through again!" Hebra is in the habit of mentioning facetiously in his lectures Mr. Hunt's remark that skin-disease (not parasitic) is either syphilitic, or to be treated by arsenic. Of a truth, our countryman may smile in his turn after the above quotation. (Canstatt's *Jahresbericht*, 1860, vol. iii., page 312.) Dr. C. H. Jones, however, would not be supposed to decry Hebra's proceeding, which he has no doubt is the result of long and careful study, and is justified by its success. It is, he can well believe, the most suitable to German skins; but he would not subject an English tegument to it, so long, at least, as he can cure the disease by our usual means.

It is certainly not common, at the present day, to meet with acute sthenic eczema requiring bloodletting, antimony, and purging. One patient, however, is at present in St. Mary's under Dr. Chambers's care, who has been bled twice to eight ounces with great advantage. Cases are given by Mr. Hunt and Mr. Green, which appear highly worthy of consideration, not only as regards the disease in question, but inflammatory disease generally. Both practitioners have their favourite cutaneous stimuli. Mr. Hunt's is arsenic internally; Mr. Green's the sulphur fume bath. Both, however, are well aware that their remedy must not be used indiscriminately, but in appropriate cases. When, therefore, the system shows evidence of acute sthenic inflammation, both agree to use bloodletting, repeatedly if needful, to purge, and enforce low diet; and the results prove the correctness of the practice.

When the force of the inflammation (what Dr. C. H. Jones denominates the tissue-irritation) is subdued by these antiphlogistic measures, then the specific stimulus may be used with the best effect; while, as appears from some of the records, if used too early, it only aggravates the disorder. Now here we have instances of a manifest, visible inflammation, pouring out exudation, which is unquestionably materially relieved by bloodletting, and the like means which lessen the blood and the intravascular pressure. Is not this good warrant for concluding that if the same type of disorder affected the lungs, the brain, or the bowels, we should do right to act in the same way? So it seems; though the cases demanding this treatment (at least in London) at the present day are few. It may then be said shortly that bloodletting, if the symptoms require it, leeches, saline aperients, preceded by calomel or podophyllin, antimony in small doses, low diet, and cooling drinks, are the means to be employed in sthenic eczema. Tepid fomentations of the affected part with thin gruel, or gelatine solution, or glycerine diluted with water, are soothing and beneficial. In severe general eczema, Dr. C. H. Jones is much disposed to think that daily packing with the wet sheet would be of material advantage.

It remains, in concluding these remarks on eczema, to say something as to the *modus operandi* of the remedies employed. First,

then, there seems no doubt that in the cases recognised as *sthenic*, and treated successfully by antiphlogistic means, these must act in the way of lowering and diminishing the morbid excitement of the cutaneous tissue, which is attracting blood to itself in undue quantity. This seems the only rational view that can be taken. Secondly, as to the action of arsenic in *asthenic* or non-febrile eczema, it seems to me highly probable that this drug acts by affecting the vaso-motor nerves of the cutaneous arteries, which contract under the stimulus, and so shut off the over-supply of blood to the part inflamed. This is no gratuitous hypothesis. We know for certain that arsenic does act on nerve-tissue in the cure of neuralgia; and, if it can affect cerebro-spinal, there is no reason that it may not similarly affect sympathetic nerves. The cure of a menorrhagia, a diarrhoea, or scleritis, may be explained in the same way. When one sees a hot, red, serum-exuding part become cool, pale, and dry, under the influence of arsenic, one is involuntarily reminded of the experiment of galvanising the upper end of a divided cervical sympathetic; and it seems scarce possible that so close a correspondence should be merely accidental.

The conclusions which Dr. C. H. Jones is led to adopt with regard to eczema are, that—(1). It is a superficial cutaneous inflammation, closely analogous to the common catarrhal inflammations of mucous tissue; (2). There is no evidence that it is the result of any separable virus, or that it ought to be regarded as an eliminative effort; (3). Like all inflammations, its two important forms are, the *sthenic*, in which the tissue is unduly irritable; and the *asthenic*, which calls for arsenic, which it may be necessary to give in rather large doses, especially in the figurate variety; (4). It does not seem at all essential to produce conjunctivitis, to secure the curative action of arsenic; (5). Given with ordinary precautions, arsenic is a perfectly safe and very manageable and efficient remedy.

ART. 99.—*On Ringworm and Vegetable Parasites.*

By Dr. HILLIER, Assistant-Physician to the Hospital for Sick Children.

(*British Medical Journal*, November 23 and 30, 1861.)

The pathological conclusions at which Dr. Hillier arrives, after a careful and masterly examination of the subject, are these:—

Tinea tonsurans is a disease of the scalp, dependent on the growth of a peculiar fungus—*trichophyton tonsurans*.

Its growth is favoured by a weakly constitution and want of cleanliness; but these are not essential to its development. It is decidedly contagious; its growth is favoured by some atmospheric conditions more than others.

The fungus of tinea tonsurans is often found in the scales of herpes circinatus; but herpes circinatus may exist without it. Some cases of herpes circinatus appear to depend on the contagion of tinea tonsurans.

Pityriasis versicolor is another parasitic affection dependent on a fungus probably distinct from the trichophyton; but a sort of pityriasis may be caused by trichophyton, and other forms of it are non-parasitic.

In sycosis there is also a parasite; but whether it be the same as in tinea, is not established.

The fungi of tinea tonsurans and tinea favosa are quite distinct.

Two different fungi may be found on the same subject, one of them being accidental in its occurrence.

Many skin diseases not essentially parasitic may be occasionally the seats of a few sporules of fungi. Alopecia areata is probably one of this class of diseases.

With respect to diagnosis and treatment, Dr. Hillier says:—

“The *diagnosis* is not difficult; at any rate, in the second stage. The roundish patches with clipped hair, roughened with branny scales and prominent hair follicles, are phenomena not found in any other complaint. The smoothness of the patches distinguishes alopecia areata and the faintness of the hair-follicles; if any hairs exist on the patch, they are pale, and of the most downy description, not thickened and dark in colour.

“The thick yellow crust of favus is characteristic, as is usually the peculiar smell. In the very onset of tinea tonsurans, you may not be prepared for so serious a disease, if you are not looking for it; erythematous rings, or raised spots, with branny scales, do not occur on the scalp from any other cause, so far as I know.

“If the scalp have been much irritated, pus may be formed, and scabs cover the diseased patches; but there will generally be some portions which have retained the characteristic appearances of the tinea tonsurans. When pustules do form, so far as I have seen them, they are but small, and not followed by thick scabs.

“It is not very often that vesicles can be discovered in cases of tinea, although it was called herpes tonsurans by Cazenave. The microscope comes in to make the diagnosis absolute, by exhibiting the peculiar fungus and the diseased hairs.

“*Treatment*.—The main indication is to get rid of the parasite, just as in scabies to destroy the acarus. A variety of substances may be used, all of which have this effect. I have tried a large number, such as corrosive sublimate either in ointment or in solution, solution of sulphurous acid, applied on lint under oiled silk, nitrate of silver either solid or in a strong solution, ointment of acetate of copper, blistering applications, and preparations of iodide of sulphur; or a mixture of one ounce of sulphur ointment to two scruples of ammonia-chloride of mercury, as recommended by Dr. Jenner. I find none which answer so satisfactorily as the compound sulphur ointment of the Hospital for Skin Diseases:—

R. Sulph. sublim., lb. ss;

Hydrarg. ammonio-chloridi, hydrarg. sulph. cum sulph., āā ʒss.;

Leviga simul, dein adde olivæ olei, ʒiv;

Adipis recentis, ʒxvj;

Creasotonis mxx. Misce.

“It must not be expected that a cure will be effected in a week

or two. If the disease have made much progress it will not be cured under several months. Epilation is recommended by M. Bazin. This is stated by Dr. Jenner to be impracticable; and I have found it to be so, except at the very onset, before the hairs are much attacked, and have become brittle. You may often fancy you have pulled cut a hair by the root, when on closer examination you will find that you have only broken it off just as it emerged from the follicle. Shaving the head is generally desirable. The internal administration of cod-liver oil and steel is of course indicated in scrofulous and tuberculous children.

"Tinea tonsurans is not a very common disease. Out of 7000 cases treated by me at the Hospital for Sick Children, from September, 1858, to September, 1861, there were only twenty-four cases of tinea tonsurans, of which three are mentioned as having been also affected with herpes circinatus; and five cases of the latter disease uncombined with tinea.

"It is probable that there were more cases in which both the scalp and the body were affected with ringworm; because, frequently, where two affections coexist, the major only is indicated in the hospital books, especially when they are so nearly allied as in the present case. The numbers just given do not fairly represent the relative frequency of herpes circinatus, because this is an affection which parents themselves frequently treat by the application of ink, or leave without treatment, as it frequently gets well spontaneously.

"The best treatment for herpes circinatus alone is the local use of astringents, such as a strong solution of sulphate of iron, or a drachm of nitrate of silver to the ounce of water."

ART. 100.—*On the Influence of Change of Climate upon Lepra.*

By M. GUYON.

(*Journal of Practical Medicine and Surgery: and Medical Circular,*
July 23, 1862.)

M. Guyon, a corresponding member of the French Academy of Sciences, recently forwarded to the Academy the particulars of two cases of lepra which occurred in a tropical country, in a family of European creoles. The disease in both cases was checked by removal to a more temperate climate. The family numbered three children, one of whom had died of tubercular lepra; the other two, one of whom was an infant at the breast, having presented distinct indications of the same disease, M. Guyon recommended a change of climate as the measure most likely to prove beneficial, and, at his suggestion, the young patients were removed to France in 1826. Since that period, the symptoms existing at the time have remained *in statu quo*, but have not become in the slightest degree aggravated. Both subjects, moreover, are now married, and the parents of healthy children.

From these cases, M. Guyon concludes that it is indubitably

possible to check the progress of lepra by emigration to climates in which the affection is not endemic, and that it is important to resort to this measure with as little delay as possible.

ART. 101.—*Singular Case of Loss of Hair.*

By Dr. R. M. FORSAYETH, of Templemore.

(*Dublin Medical Press*, June 25, 1862.)

CASE.—J. C., head gardener in the employment of John Carden, Esq., Barnane, about 48 years of age, spare, thin, of not very temperate habits, continually labouring under dyspepsia, loss of appetite, and uneasiness in the epigastric region, but otherwise healthy, and, from the nature of his employment, of active habit. He was attacked about four months ago with sudden headache and general illness, towards evening with much sickness, pain and uneasiness at pit of stomach, so as to alarm his wife. He went to bed and got some hot drink, when feeling better he fell asleep, and awoke early in the morning well as usual; but on his wife turning round to look at him, she exclaimed, "what has become of your hair!" He at once discovered that not a vestige of hair existed upon his head, face, or any other part of his body—eyebrows, eyelashes, whiskers, beard, &c., all having shared the same fate, taking place during the brief space of five or six hours.

The most extraordinary feature in this unique case is, that up to this day, now about four months, I cannot discover any tendency whatever towards the reproduction of the lost hair. The chief inconvenience which he labours under results from motes, &c., flying into his eyes, by reason of the absence of the eyelashes. It is also remarkable that all his former complaints disappeared instantaneously. Appetite now so keen, he must get food upon rising from bed; he also has gained flesh; his skin is softer, fairer, and fresher than before, and so much altered in appearance for the better, that although I am acquainted with him for years, yet I did not immediately recognise him when first we met after this unusual occurrence upon the terrace at Barnane.

ART. 102.—*A Pomade to prevent the Fall of the Hair.*

By Dr. DAUVERGNE.

(*Bulletin Général de Thérapeutique*, July, 1862.)

The beneficial effects of resinous and balsamic preparations in the diseases of the hair and the hairy scalp have long been known, and recent researches in the clinical wards of the Hôpital St. Louis, in Paris, have confirmed the empirical recommendations of the use of these agents. Dr. Dauvergne has therefore often recommended ladies who were losing their hair to use tar-ointment, by means of which he has seen the hair in many cases resuming its strength after it has been affected with pityriasis, porrigo, favus, &c. But the disagreeable and penetrating smell of the tar was almost an invincible obstacle to its use; and Dr. Dauvergne has therefore endeavoured to conceal its odour by mixing it with perfumes of various kinds. He considers tar preferable in many cases to cantharides, inasmuch as the latter agent is inapplicable to the diseases of the hairy scalp, or of the hair-bulbs, or the hairs themselves.

The pomade proposed by Dr. Dauvergne consists of tar, benzoin, musk, essence of patchouli, lard, &c. ; and although in large quantity it retains a little smell of tar, yet when used for the hair, the perfume of the patchouli and the musk predominates. The exact proportions are the following:—Lard, 30 grammes (a gramme is 15·434 grains); Norwegian tar, 3 grammes; butter of nutmegs, 2 grammes; benzoin, 2 grammes; Fioraventi balm, 3 grammes; baume de commandeur, 3 grammes; musk, 5 centigrammes (a centigramme is 1543 of a grain); and essence of patchouli, 50 centigrammes.

ART. 103.—*On Glycerole of Tar (Tar-plasma) in place of Tar-ointment, in Certain Skin Affections.*

By Mr. HENRY B. BRADY, of Newcastle-on-Tyne.

(*Pharmaceutical Journal*, September, 1862.)

A combination of glycerine and tar has been used recently in skin affections instead of the tar ointment of the Pharmacopœia. The advantages seem to be that the glycerine compound is more readily absorbed, and less difficult to remove by washing. Mr. Brady has not been able to find a formula for the preparation in question, and he therefore proposes the following, as yielding an unexceptionable product. The strength is the same as that of the unguentum picis liquidum, P.L. Price's glycerine, six ounces weight; tar, six ounces weight; powdered starch, two drachms. Warm the glycerine, stir in the starch, add the tar, and raise the mixture rapidly to the boiling point. Strain through a cloth, if necessary, and stir whilst cooling. The mere mixture of glycerine and tar heated in a water-bath, gives on cooling a spongy mass, the pores of which are filled with glycerine; after standing some time, complete separation takes place. Tragacanth, acacia, soft soap, and many other things have been tried as substitutes for the starch, but none of them with so good result. Made according to the above formula, glycerole of tar is a dark brown mass, perfectly smooth, in consistence somewhat softer than the ointment.

PART II.—SURGERY.

SECT. I.—GENERAL QUESTIONS IN SURGERY.

(A) CONCERNING INFLAMMATION.

ART. 104.—*On the Subcutaneous Treatment of Boils and Carbuncles.*

By Mr. J. G. FRENCH, Surgeon to the Infirmary of St. James's Parish, Westminster.

(*Proceedings of the Royal Medico-Chirurgical Society, June 24, 1862.*)

DURING many years, Mr. French has occasionally adopted the mode of treatment which he here describes and illustrates. The extent of the induration of the integument is first carefully examined, and then a tenotomy knife is passed horizontally underneath it, the blade turned upwards and, the forefinger of the left hand serving as a guide upon the upper surface of the tumour, the hardened structure is cut through, taking care not to wound the surface of the skin; it is, in fact, a sub-cutaneous division of the disease, and is carried to the utmost extremity of the induration.

The disease, previously spreading, is at once arrested in the direction of the knife, but it is necessary to make a second puncture at right angles with the first, and thus a crucial incision, or it will still spread in the opposite direction. The bleeding is sometimes considerable, sometimes trifling, and when this has ceased, the whole surface of the tumour should be covered with collodion. Immediate relief is felt by the patient as the result of this proceeding, and he is able at once to pursue his ordinary avocations. The inflammation speedily resolves, or if any suppuration whatever occurs, it is in very small quantity, and easily finds vent through one of the punctures.

The following cases will serve to illustrate the subject, but they only comprise a small portion of Mr. French's experience of this mode of treatment:—

CASE I.—A lady, residing in the country, brought her daughter to London in May, 1848, for the express purpose of going to some balls. On the day before the first party the young lady was attacked with a boil on the face; this, from previous experience, she well knew would render her wholly unfit to be seen at a ball. Being consulted as to the possibility of

incision simply or crucially in the centre, does not, so far as my observation goes, appear to do much good; and I think the doubt about the good effect of operative procedure, which exists in the minds of some, is due to the observation of this method alone."

ART. 105.—*On the Efficacy of Baths of Oxygen Gas in Senile Gangrene.*

By M. LAUGIER, Surgeon to the Hôtel-Dieu, Paris.

(*Journal of Practical Medicine and Surgery; and Medical Circular*, July 2, 1862.)

In a communication recently made to the French Academy of Sciences, M. Laugier, after referring to the theoretic data on which the medication is founded, stated that he had resorted to the method in two cases. The subjects were aged respectively 75 and 76 years, and in neither was any anatomical change in the circulating system apparent on the closest examination. The pulsation of the *dorsalis pedis* artery was perfectly distinct in both instances, and there was no reason to suspect disease of the coats of this blood-vessel. The mortification was for two years and a half preceded by considerable pain in the foot, especially at the instep, and beneath the second toe.

The only treatment adopted consisted in placing the foot for one hour every day in a bath of oxygen gas, by means of a very simple and easily-constructed apparatus.

The gas was generated in a retort, containing chlorate of potash, and communicating by a bent tube with a phial in which it passed through water; thence another tube, safely luted, conducted the oxygen into an ox-bladder. The latter was supplied with two orifices, one for the admission of the foot, the other for the escape of the superfluous gas. An india-rubber band tightly fixed the bladder to the ankle, and the heating apparatus was a common spirit-lamp.

After five or six days' treatment, the pains decreased, the gangrenous patches contracted and assumed a roseate hue, and in a very short time, all pain and tenderness entirely disappeared. The second patient is still under treatment, but the first, who was admitted into the Hôtel-Dieu on the 17th of March, has left the hospital. At the beginning of April, the eliminative process was far advanced. On the 10th, the eschar fell away, exposing a superficial and healthy-looking wound. The oxygen baths were persevered in, and complete cicatrization was effected on the 24th of April.

The theoretical data upon which this mode of treatment is founded are contained in a thesis presented to the medical profession in Paris the 25th of February last by M. Reynaud, entitled "Local Asphyxia and Symmetrical Gangrene of the Extremities." In this thesis it is stated that the gangrenous parts have been submitted to analysis by M. Reveil, and that after these analyses the author has arrived at the conclusion that the fundamental cause of gan-

gone consists in a diminution or absence of the oxygen necessary to the integrity of the vitality of tissues.

ART. 106.—*Successful Treatment of Pustula Maligna in Men and Animals.*

By M. SANKIEWICZ.

(*Med. Cent. Zeit.*, xxxi. 1. 1862.)

In consequence of a communication of Dr. Bergson, M. Sankiewicz has tried the following plan in many cases of pustula maligna. In the first place, in order to hinder the extension of the carbuncle and perhaps the absorption of pus, he marks a line with a paste composed of three parts of potassa fusa and one part of chalk. If this cause great pain, the skin of the whole neighbourhood must be made insensible by the local application of chloroform. In half an hour, the paste is removed, and the cauterized part wiped with a wet sponge, and a poultice, medicated with equal parts of belladonna, hyoscyamus, and stramonium, is applied over the carbuncle. In those cases only in which the evacuation of the carbuncle secretion through the ulcerated openings is deficient in quantity, M. Sankiewicz recommends a longitudinal incision, from above downwards. In those cases where there is a large collection of matter in the pustule, it is necessary to press it out with a spatula wrapped in lint. Fistulous openings should be syringed with a decoction of salvia (3ij. to 3iv.), with limewater (3iv.); when they are beginning to heal a compress of charpie should be used with a dressing composed of Peruvian balsam (one part), oil of hyoscyamus (3 parts), olive oil (2 parts). By these means the absorption of pus is prevented, the crucial incision and the large scar which follows it are avoided, and the cure is rapid and certain. This method succeeds well with animals. Of nine horses affected with the pustule, eight were cured by it. In the treatment of animals, the paste employed is composed of sulphate of copper (4 parts), and quick-lime (1 part): the pustules are opened with a longitudinal incision, and the wound washed out with a solution of potash.

(B) CONCERNING TUMOURS.

ART. 107.—*On Tumours, or New Growths.*

By Dr. WILKS, Assistant-Physician to Guy's Hospital.

(*Medical Times and Gazette*, July 26, 1862.)

In one of his lectures on pathology, Dr. Wilks, speaking on this subject, says:—

“I will now proceed to the consideration of the subject of tumours or new growths, and I may at once state that I see no reason to alter the opinion I have long expressed, that there are not to be seen in morbid products any cells which deserve the name *heterologous* as distinguished from *homologous*, or those which resemble

the cell-forms of healthy parts. The opinion you know which has generally prevailed is, that certain tumours are composed of the same structures with those found in the healthy body, and that these constitute the innocent growths, whereas others are composed of elements foreign to the body, and these are the malignant. It thus became the object of the microscope to discover in what this difference consisted; when, therefore, it was positively stated that cancer, tubercle, and other substances could accurately be distinguished by the characteristic peculiarities of their cells, the long required desideratum seemed accomplished, and pre-existing opinions more firmly established. We had, indeed, nothing to do but to apply the powers of this instrument to any new growth, and at once decide upon its innocency or malignancy. I myself have never admitted the fact, that the microscope can assert such peculiarities; and even should it do so, the whole subject is then far from being exhausted, for there are still left many tumours and newly formed substances which come into neither category of malignancy or innocency, but hold intermediate positions; and there is the fact, also, that many tissues, as bone, cartilage, &c., which the microscopist would call innocent, are propagated through the body like malignant growths. These facts alone demand that we should take a very large and extended view of the subject, and, therefore, I feel surprised that in the latest surgical works the articles on cancer and innocent tumours should have been written by separate authors and in a different spirit, whereas such division is quite artificial, and damages a subject requiring a most comprehensive treatment. The subject has, in fact, been too much studied as one of surgery, and in relation to external growths, whereas it is one rather of general pathology, and should be treated of only by those who will take in the whole range of morbid processes, whether affecting the internal or external parts of the body.

“It wants but a moment's consideration to remember that nearly all new growths are of the simplest composition, that we do not discover in them those complex structures of which the various organs of the body are made up, and in this seems to lie the great difference between physiological and pathological formation; and first of all, you must remember that in the case of a cell with its nucleus we usually regard the latter as the active germinal part, whilst the former, with its contents, has been modified according to circumstances so as to constitute the peculiar features of the tissue which it forms. Thus the cells in various parts of the body have already been developed into their characteristic forms, and having their own peculiar functions, whilst the nucleus remains powerful only to preserve the cell in its integrity and to propagate a new generation of cells. The instances where the changes in cells are most strongly marked are those of blood-vessels, muscles, &c., but here the nuclei are still seen. Now, in an ordinary physiological process where there is a constant wear and tear in the tissue, we suppose that these formed cells are constantly wearing out, and their place supplied by new ones, and that this process goes on in so quiet a manner under the direct influence of the parent tissue

itself, that no obvious changes are seen. The material out of which the new tissue is formed is of course the blood. In a pathological process it would seem that there is an excess of pabulum afforded by the blood over that which is necessary to the healthy growth of the tissue; and this being more out of the influence of the original structure whence it proceeds, cells of a simple character are alone produced, and which cannot assume the form or function of the complex organ whence they sprang. Thus, tumours and other growths in the various viscera of the body are not of the nature of the organs themselves, but are of the simplest character.

"You will be ready to ask at once, why should this exudation and production of cells occur? but this question can only be answered by the fullest investigation of the whole subject before us, and then only in part; seeing that a positive answer would include in it whether cancer, for example, arose from a local cause or whether there must not be some constitutional vice in the system to start it into being; whether, indeed, it be a local affection, and the sooner removed the better, to prevent contamination of the system, or whether being due to some depravity in the body, such operation is useless. These are certainly the most important points about which to gain information, and at present very contradictory opinions prevail; the constitutional cause of cancer being strongly held by most surgeons, and those of much clinical experience, whilst its local origin is one which a study of pathology would rather incline us to embrace.

"These new products, which are formed in a pathological sense, and out of the immediate influence of the tissue whence they spring, are, as I have said, of a very simple character, not putting on the form of the complex organs near which they may grow, but consisting principally of cells and fibres,—the latter being formed either from pre-existing cells, according to one theory, or by the fibrillation of a simple exudation, according to another theory; but in whatever way the fibre is formed it is not propagated like the simple cell-growths, and is, therefore, styled non-malignant. Here, again, the question arises, why should one of these products arise rather than the other? Is it due to a want in the system of that vice which may be supposed to have produced simple cells, and to the presence of a more healthy state, which has power to form fibre, or is the difference due solely to a local cause, and to the different tissue in which the two may originate, although apparently springing from the same organ? This is the question, like the other, which would carry most important results in its answer; but the time has not arrived to satisfactorily give it. All I can say is, as before, the tendency of pathological research is rather to take the heterodox course, and lead to the belief that local causes have very great influence in inducing the difference.

"Besides these opposite kinds of growths, we have several intermediate ones, of semi-malignant characters; and thus we may say that in nearly all parts of the body new growths are composed of cells and fibres in various degrees of development and of admixture, and that just in the proportion as the active parts of the cells are

alone produced, the nuclei, so is the growth eminently malignant, and disposed to propagate; and just also in proportion as the growth is prone to fibrillate, so is it disposed to be innocent.

"I have said that the majority of tumours are composed of these simple elements, it appearing that the complex structures cannot be reproduced; but if the tumours should spring up in contact with some of the less complex parts, then we find the tumours modified according to the nature of these parts. Thus we find that a growth on the skin may be composed of epithelioma, and growths near the mammary and labial glands to consist of glandular structures. So, also, tumours near bone may be osseous, enchondromatous, or, if springing up in the marrow, myeloid.

"I have thus endeavoured to give you in a few words a general idea about new growths or tumours—that in the soft parts, and indeed in most parts, of the body they consist mostly of cell and fibre; the more cellular the more readily propagable, and therefore malignant, whilst the more fibrous the less capable of propagation and less malignant. This is the general idea; and you will remember that, although thus uninfluenced in their development by the more complex organs, they are modified by the more simple ones, and thus on the surface of the body a growth may have epithelial elements, near the breast may contain imperfect mammary tissue, and if near the bone may consist of osseous structures, &c. It is a consideration of these latter cases which inclines me to the belief that the local influence has more to do with the growth of a tumour than the constitutional; for it is a fact that an osseous tumour, even though propagated through the body like malignant disease, has its origin in a bone, and therefore has a local cause to determine its character. The argument is not so simple in case of cancer, because this may have its source in so many parts, but none the less is the reason for its local origin if other circumstances tend to favour this view.

"To begin, then, with the cell and fibre growths, which we may regard as the typical forms: and first with the cells. The cancer-cell, as described by Lebert and others who believe in the specific character of the cell, is a sphere with an elliptical nucleus placed excentrically, and occupying half or more of the interior, and with one or more large nucleoli. This, according to some, would arise in a free blastema, whilst others would make it spring from a pre-existing normal cell; but, whatever theory is held, it is evident that the greater disposition such cell has to generate, the more unhealthy is the process: and, on the other hand, the greater the effort to approach in form to a natural tissue, the more is the process allied to one of health. You can thus see why one propagates and is malignant, whilst the other has less power of this kind and is innocent. You can conceive of nothing in the body having more of a malignant nature than this—an objectless cell-growth. This would be true, you will say, did the cell have no particular features of its own, but resemble the simple embryonic cell from which the tissues spring. For my own part, I think that this is the case, and that the so-called cancer-cell is no more than an embryonic cell.

You will, therefore, judge at what value I rate the microscope in this inquiry; that if particular cells are placed before it, it will be unable to decide as to their nature; but with the viewer's knowledge of the source of these elements, it will very accurately declare their character.

"The active principle of growth lying in the nucleus, it is clear that the more the tumour is composed of nuclei the more malignant is its nature, and the better formed the cell wall so is the growth less malignant: and so on according to the further development of the cell wall. I have been in the habit of explaining this on the generally received principle that the nucleus is first formed and subsequently the cell—the latter showing a higher state of development. Upon the more modern theory of Virchow, I scarcely know how the fact is to be explained that the most highly malignant tumours consist of little else than nuclei; but you will find this to be the fact, that the most acute cancers, the encephaloid, which often involve various parts of the body at the same time, and sometimes run their course in a few weeks, consist of nothing but nuclei and molecular matter,—a careful examination showing that the nuclei are imbedded in a homogeneous and almost fluid matrix; and unless the spaces in which the nuclei are situated are styled cells, there is certainly no other appearance which can represent such bodies. When we discover a well-formed cell wall the growth is firmer and has been generally of slower progress, and at the same time the matrix in which it lies is firmer. As the development of the cell wall still goes on, so it becomes angular or caudate; this shows a much slower growth, and that the tumour has a more healthy tendency. It is generally also much harder, as the matrix in which the cells lie is of a fibrous character. This form of cancer is styled 'scirrhus.' An intermediate form between this and the soft acute encephaloid, just mentioned, might be called *firm* encephaloid. These facts are constantly brought before my notice by the disappointment of students who eagerly take specimens of large well-marked cancerous tumours for examination and find nothing but nuclei, whereas the caudate cells which they so much love to see, are to be rather found in some slow-growing obscure tumour which they might readily overlook.

"Suppose, now, that the cell should develope still further and become pointed at each end, it would show that the tumour, of which it was the constituent element, was of a less malignant character: and we come then to the case which, above all others, opened my eyes to the fallacy of a distinct line being drawn between malignant and innocent growths—a difficulty, however, not hard to surmount to one who had never discovered the peculiarity of the cancer cell; to those, of course, who had such belief a case of this kind afforded a considerable difficulty, for here was an example of a tumour presenting no nucleated cells to the microscope, and yet returning after removal. It was a case, indeed, to add fresh triumph to the microscope rather than disgrace, for the surgeon, by long clinical experience, had found that a tumour of this kind had as many characters bordering on innocence as on malignancy, that he

was fain to look upon it as an immediate kind of growth, and then calling in the aid of the microscope he discovered that it was composed neither of well formed cells nor of simple fibre, but something between them; a corroboration, if any had been wanting, that a tumour intermediate between the others and of a semi-malignant nature was under notice.

"Next to this we may speak of those cases where more of the fibrous element exists, and the tumour is consequently less malignant: such as the fibro-nucleated, which often return after removal; also, varieties of this, as the collagenoma or gelatinous sarcoma, composed of long delicate tendril-like filaments with oval nuclei, and which also are sometimes recurrent—these may be called *soft* recurrent, while those previously spoken of are firm recurrent tumours. The tumours composed of simple fibre like that of areolar tissue are innocent.

"Although I adopt the word 'tumour,' it must be remembered, as I have already said, that this is not a universally applicable term, nor indeed any other expression founded on the relations of a new growth to surgery alone. For example, 'recurrent fibroid' is an absurd expression when this class of growth occurs in a stomach or lung, showing that some other appellation is required indicative of its actual structure or its semi-malignant character.

"For the sake, then, of simplifying the subject, and that you may retain it better in your minds, I have divided these tumours into the innocent, semi-malignant, and malignant; but you must remember that there are various grades between them in respect to their varieties and character. And taking these as types, we shall be better prepared to understand most of the other varieties of tumours which replace them under particular circumstances; and beginning with the case of bone, we shall find that various innocent and malignant tumours of an osseous kind correspond to those already mentioned, and which, indeed, probably would have been those very identical tumours had not the presence of bone determined other characters within them.

"We shall find, then, that just as lymph effused in contact with bone becomes osseous, so also do tumours in the same vicinity put on a similar character. Thus, cancer of bone often ossifies, and then, what may appear remarkable to some of you, this disease is propagated through the system as bone. What determines the amount of ossification is uncertain; but when it has only partly undergone the change, there are sufficient of the cell elements remaining to indicate the cancerous character of the growth; the most difficult case in which to determine its nature is that where the entire growth appears to have become ossific, as in a remarkable case in the Museum, and which nevertheless was highly malignant—that is, if malignancy signifies the power of propagation. Sometimes, I say, the cancer may be small in amount, and destroy the bone: in other cases, as in one lately in the hospital, a soft cancer of the fibula wholly ate away the bone, but at the same time new ossific material was growing in the cancer. In the former case, just mentioned, the deposit took place in the interior of the bone,

and became much harder than the original tissue itself, yet the neighbouring glands were bony, and secondary tumours of the same nature occurred in the lungs.

"Just also as the cancerous tumour in the soft parts is distinguished from the less malignant or recurrent fibroid by the destructive nature of the one and circumscribed character of the growth of the other, so the same may be remarked when these several tumours grow from bone. The semi-malignant or recurrent fibroid grows as a circumscribed tumour around the bone, not interfering with surrounding parts. Much of the fibre tissue becomes ossified, and then we have a fleshy-bony or osteosarcomatous tumour. As also wherever bone exists we may expect cartilage, so in this variety of growth we may often find an admixture of this substance. The malignancy varies just as the simple fibroid varies, according to the character of the fibre; and thus as occasionally we meet with malignant fibroid tumours, so we now and then have malignant osteosarcomatous. I can show you several examples of this; one a perfect case where, after amputation of the arm from osteosarcoma, the patient died with the same disease developed in the lungs.

"The simple fibrous tumour of bone would of course be replaced in the skeleton by an exostosis or enchondroma, both of them innocent tumours; or in the medullary cavity of the shaft by a myeloid. This name, given by Mr. Paget, is distinctive, and points not only to its nature but its outward aspect; for, growing from a centre in the middle of the bone, it assumes a rounded form very characteristic of the disease. It may of course be associated with other elements when a tumour involves a large part of the shaft, but then of course it is not entitled to its own name alone; in its simplicity it may be called an innocent growth, and in all the recorded cases this has been its character. I can show you, however, an example where it returned on removal, and subsequently tumours of a similar nature sprang up in the lungs; a case, I think, clearly proving that a tumour which, under ordinary circumstances, is loath to contaminate the system, may do so under the favouring influence of a long period of time.

"Now, take another organ, the female breast; we find that cancer and semi-malignant growths, as recurrent fibroid, may occur here as elsewhere, but the simple tumour is replaced by the adenocoele, a tumour composed of imperfect mammary tissue. Mr. Birkett divides these into classes, according to the amount of simple fibre which may be developed between the gland tissue, and thus they correspond very much to the artificial dissections which may be made of the healthy organ. Just as the latter presents a uniform amorphous mass, until dissected to show its lobes, lobules, ultimate ducts, &c., so in the case of the new growths, all these appearances may be presented according to the amount of connective tissue which is produced among the lobules. An interesting and important point to observe is, that occasionally, together with the mammary tissue, the fibre is of the recurrent fibroid variety, and thus a tumour which may be styled simply adenocoele, may return

in virtue of the other element which it contains, or be developed probably as a secondary growth in the lungs. No case has yet been recorded where the mammary elements have been propagated in distant parts."

ART. 108.—*Contributions to the Pathology of Cancer.*

By Mr. W. M. BAKER.

(*Proceedings of the Royal Medico-Chirurgical Society*, July 8, 1862.)

The cases of cancer upon which this paper is constructed are 500 of those recorded by Mr. Paget between the years 1843—1861, and all of which had come under his own observation. Only the external or so-called surgical cancers are included in this number.

The first part of the paper shows the proportion of cases in each organ and each sex, and the per-centage of the several kinds of cancer,—each part of the body being attacked, as a rule, by one form of the disease almost exclusively. The greater frequency of cancer in females is found to be due to cases of scirrhus of the breast; in the cases, in almost all the other external organs, especially those subject to epithelial cancer, the proportion of males is greatest. The influence of age is next noticed, and the increasing liability to cancer as people advance in life; the absolute number among the 500 cases at each age being given, and also the relative frequency in proportion to the whole population living at the same period. In external organs, medullary is found to be the most frequent variety in youth; scirrhus and epithelial in middle and old age. The number of females affected with cancer, in proportion to the whole population, is found to increase rapidly from the earliest age up to 40—50, and then more gradually decline. In males the number increases up to the age 50—60, and after this declines again, the rise and fall being both of them more gradual than in females. The kind of cancer to which each sex is most liable accounts for the difference. The condition of the female patients—whether single, married, or widow—is noticed, and also the influence of each on the production of cancer. The proportion of cases of cancer in the breast is found to be greater in the married than in the single, both absolutely and in proportion to the number in which the two classes exist in the community. The state of health of the patients at the time of the beginning of the disease is ascertained, and found to be good in a very large majority; a rather larger proportion of the medullary and epithelial than of the scirrhous being in bad health at this date. The question of cancerous inheritance is in the next place considered, and answered in the affirmative, 24 per cent. of the patients giving a history of cancer in other members of the family; the per-centage, too, in the private cases, in which the family history would be better known, is considerably greater than in the hospital. The variety of cancer is not always the same in all the members of the family attacked. Tables of the date of recurrence after operation are given, and the several kinds of cancer compared in this respect; the average num-

ber of months which elapsed between the date of removal of the primary disease and the recurrence, was greatest in scirrhus and least in epithelial, but a larger proportion of cases of the last variety remained without any recurrence for a period far beyond the average. The date of recurrence after early and late operation is compared; the difference between the two being but small, probably from the acute cases being the earliest to be removed and to return. One or two of the cases, remarkable for their long-deferred recurrence, are given more in detail. The last part of the paper is devoted to considering the duration of life, especially with the object of comparing the cases of operation with those in which the primary disease was not removed. The greatest difference in the two sets of cases is found to exist between the epithelial cancers, and the least between the medullary; but a marked increase of life on the side of the operations is present in all the varieties. Part of this result is, of course, due to the selection of cases for operation. Some of the organs are compared separately, and the same advantage on the operation side was shown in each, with one exception—viz., the bones, in which the duration of life was exactly the same on both sides. The influence of early and late operations in respect to the duration of life is also considered, and, as in the recurrences, only a slight difference was observed; indeed, the length of life is greater in the cases in which the operation was performed at two to five years after the first observation of the disease than in those at one to twelve months, the former being all chronic cases. Lastly, the duration of life in the hospital and private cases is compared, and the advantage shown to be on the part of the hospital. Some of this difference may, however, be accounted for by a large number of the hospital cases being submitted to operation.

ART. 109.—*On the Value of Pulsation in the Diagnosis of Tumours.*

By Mr. MOORE, Surgeon to the Middlesex Hospital, &c.

(*Lancet*, May 3, 1862.)

In a clinical lecture delivered in the course of last summer, Mr. Moore, speaking upon this subject, says, "There are tumours which pulsate, but are not aneurisms, and there are tumours which do not pulsate, yet are aneurisms. It is often easy to be deceived without care and some experience of this symptom of pulsation; it is sometimes most difficult to be certain as to its cause even with experience and much care. Opportunities have lately occurred of estimating (shall I say of illustrating?) the difficulties of diagnosis in some of these cases; a few remarks upon them may therefore not be deemed unsuitable.

"I. A woman was long under my care in Laffan ward. She had claimed attention for cancerous tumours in the breast, which actually lessened while she was under observation. For many weeks the treatment was directed to little else than the relief of deeply-seated pains in the loins. These were not uterine, for she was entirely

without any other symptom of disease in the womb. The kidneys also were healthy. But some of the vertebræ were tender when struck; and, as I watched her from month to month, I found her becoming shorter in the trunk, and her spine distorted both laterally and backward in two places. Some numbness and paralysis of the lower limbs were coming on, when I called your attention to a low, smooth swelling in the middle of the sternum. It beat visibly with every systole of the heart. It beat strongly too, and no one could be surprised that most of those who felt it thought rather of the proximity of the aorta than of the history of the case, and called it aneurism. Later still, similar tumours appeared on the head, every one of which pulsated, though with much less force than the sternal swelling; and when she died we found multitudes of cancerous tumours throughout her body, of which those only had pulsated that sprang from the bones.

"Now, apart from the situation of the swelling on the sternum, there was no symptom but this pulsation which could have led to any mistake in the diagnosis. How, then, was the beating distinguished from that of an aneurism? It may be sufficient merely to mention in passing that there was no indication whatever of an affection of the arterial system, of the respiration, or of the heart, one or all of which would have presented symptoms if an aneurism of the aorta had perforated the sternum. But there were these characters connected with the tumour itself which helped to decide its nature;—1. Its beat, though remarkably powerful, was too prolonged to be aneurismal. It was quicker indeed, and greatly stronger, than the beat at an infant's fontanelle, but it was not abrupt, not instantaneously expansive enough to have been aortic. 2. An interval of time could be perceived between the impulse of the heart and that of the swelling. This could not have been the case if the blood sprang forth at once from the left ventricle into the tumour, but was quite consistent with the supposition that the latter was fed by the way of the internal mammary arteries. 3. In the interval between two beats the tumour could be felt under steady pressure to be solid, not fluid. 4. The sound which was heard on auscultating the tumour, so far as it could be distinguished from that of the subjacent heart, was similar to that of an aneurism, but it differed from the recognised *bruit* in having less roughness and intensity.

"Some years ago I had the opportunity of observing the commencement of pulsation in a tumour. A man came into Forbes ward with a swelling of one knee. At first sight it looked like a disease of the joint, but a closer examination showed that the inequalities of its surface were not produced by a distension of the synovial membrane, but were lobes of a tumour. It was all hard and bony, except at one spot, where a prominent lobe was elastic, and, when pressed, was felt to crackle like parchment. Whether the disease were myeloid or malignant was uncertain; but it was already quite clear that it could not be aneurismal, when one day the largest prominence, which had been increasing in size, began to pulsate. Compared with the beat of an aneurism in the ham, that of

the swelling from the bone was soft and slow. It gave no pain, did not expand, and presented no bruit. I amputated the limb, and the disease, as you may see by the specimen preserved in the museum, was encephaloid.

"These tumours did not pulsate because they were encephaloid. Placed in soft parts such masses have no beat; nor have other tumours which are more vascular than these. In a paper on these particular tumours of bone, in vol. xxviii. of the 'Medico-Chirurgical Transactions,' Mr. Stanley described the pulsation as sometimes, in great part, occasioned by large blood cavities in the tumours, with which the arteries were presumed to have freely communicated. There were no such blood-cells in the tumours just described. Their vessels were large, and the tissue in which they lay was soft, and expanded easily. The pulsation seems to have been due, therefore, to the accidental position of the tumours. What was this? They were enclosed in bone, except at a part of their surface. So soon as the bone had given way, the vessels of the tumour, no longer pent up within an unyielding structure, expanded freely at each systole of the heart. Their separate impulse was not perceptible at the surface; but all the force and extent of their beat cumulated into a pulsation, which was strong or weak in proportion to the vascularity of the tumour. The power of the impulse, as Mr. Stanley has shown, and as you have felt, may equal that of an aneurism.

"That this is the correct explanation appears proved by the fact that the same symptom is produced in other cases by like circumstances. If, for instance, an abscess in bone, having one narrow outlet, be filled with pus, the matter may be seen to rise in the opening at each pulse, even the small vessels of the granulations which line the abscess expanding sufficiently to produce the symptom. A decided pulsation, again, in a fluid swelling on the head, can be regarded as proving that the fluid has come from within the cranium. The mechanism by which this is produced I need not again explain; but its force you will remember by what you noticed in Mr. Shaw's recent case of encephalocele.

"II. Here are two examples of a second kind of pulsating tumour. Each is formed of a cluster of diseased glands, and each situated in the bifurcation of a large artery. In the one instance, the mass, as it grew, had parted the internal and external carotids, which curve closely beside, and make one tumour with, it. This far greater swelling also—a collection of cancerous glands—has a somewhat similar relation to the common iliac artery. Its external branch arches high over the huge mass, the internal iliac is close behind it, and the chief branches of the latter artery go through it. I can say nothing of the kind of pulsation in the first case, for I did not feel it; but that in the latter was very powerful. The tumour rose at each beat, expanding the fingers which grasped its superficial convex part; and the entrance of blood into it was audible through the stethoscope as a bruit.

"The mere proximity of glands to an artery does not suffice for the conveyance of pulsation to them. You saw, a day or two since,

the case in Seymour ward to which Dr. Thompson called me. A number of glands were enlarged, without running together into a common mass. The right subclavian artery passed amongst them, and seemed raised higher in the neck by them. They pushed forward also the common carotid and the innominate arteries. Yet a very slight examination convinced us all that the unusual general pulsation above the right clavicle was not that of an aneurism. Any single gland could by pressure be isolated, and could be felt free from pulsation, while the real beat could be defined to occur only in the course of the displaced arteries. Something more, then, than mere contact is requisite to convey to a tumour a deceptive pulsation. The vessel and the mass in its neighbourhood must be, as it were, identified, so that their pulsation should be really common. We find accordingly that such tumours have the relation to the bifurcation of an artery which I have already spoken of, and are moreover compressed together with it in a tight fascial envelope. In proportion to the number and size of the arteries within the fascia must be the force of pulsation in the entire tumour, which will also be further increased on one side if the other side happen to rest against a bone. All these sources of fallacy existed in the case of this inguinal tumour; and I was led, as you see by the specimen, to tie the common iliac artery. I have no doubt that the bursting of the fascial covering, unlike the destruction of the bony covering in the first class of cases, would have stopped, instead of developing, the pulsation.

"III. There is another kind and cause of pulsation in tumours, which may be best illustrated by the 'pulsating bronchocele.' It is a short, sharp, tremulous beat, which is felt as the blood enters the tumour, but which does not expand it. The arteries all over the body beat in the same manner, with a violent yet feeble kind of agitation. I cannot suppose that you would be led by this pulsation, vigorous as it seems, to imagine a bronchocele to be an aneurism, when you had once noticed the general state of the arterial pulse, and had recognised the plain characters of the tumour. It is not impossible, however, that when such a pulsation occurs in a number of large vessels near together and at some depth from the surface, some perplexity might occur. The epigastrium is a region where such vessels and certain perplexing and temporary pulsations, apparently of this sort, are met with."

ART. 110.—*On Deceptive Fluctuation.*

By M. NÉLATON.

(*Journal de Médecine et de Chirurgie Pratique*, May, 1862, and *Edinburgh Medical Journal*, July, 1862.)

Not long ago M. Nélaton took the opportunity afforded by the admission of a man who had received a severe injury of the forearm, to point out to his class an error which is frequently fallen into, and against which it is well to be prepared. The injury in question had been produced by a circular saw, revolving three or four hun-

dred times in a minute; the skin, the superficial muscles, and the tendons had been divided, but neither the vessels nor the nerves had been seriously compromised. The wound had been brought together by points of metallic suture, but, as usually happens in such cases, union had not taken place. In fact, when the muscles, the tendons, and the sheaths are divided, we should not attempt to bring about union by the first intention, as we shall fail in our endeavour, and may expose the patient to serious accidents. In the patient in question, the dorsal surface of the hand was considerably swollen, and fluctuation seemed so distinct, that many persons would have supposed the swelling to be occasioned by a collection of purulent fluid. This was not the case, and M. Nélaton pointed out that there are various parts of the body where the tissues impart a deceptive sensation of fluctuation. In the upper extremity these parts are the dorsal surface of the hand, and the upper and external part of the forearm on a level with the head of the radius. Without a knowledge of this fact, we might be very apt, on the occurrence of a swelling in either of these regions, to introduce an instrument which would give issue to no fluid but blood. The same error has been committed a hundred times in the case of imaginary collections of pus in the substance of the calf of the leg, as well as in the upper and outer part of the thigh, in the situation corresponding to the tensor vaginae femoris. Another locality where this deceptive fluctuation occurs, is the inner and upper part of the thigh, on a level with the iliacus and psoas muscles.

ART. 111.—*A Remarkable Case of Numerous Cutaneous Tumours.*

By Mr. M. C. FURNELL, Zillah Surgeon, Tellicherry.

(*Madras Quarterly Journal of Medical Science*, July, 1862.)

These tumours appear to have been of the description called molluscum by systematic writers. The case in many respects bears a striking similarity to one which is described by Mr. Erasmus Wilson in his work on skin diseases. The account is illustrated by a lithograph.

CASE.—The subject of this case was met with accidentally in the bazaar begging, and certainly was the most wonderful being I ever saw.

He was literally covered with small and large tumours, looking more like the knots on an old gnarled oak or the nuts on the *Quercus infectoria*. The thorax and back were literally studded with small tumours, and one much larger than its neighbours hung pendulous from the back of his head. It was found afterwards, when he came to the surgery to be examined, that another of much larger size hung from the buttock, as represented in the sketch, but that on the lower extremities the tumours were fewer than on the thorax, until at last the feet and lower portion of the legs were free.

The man was, except as regards the tumours, in admirable health and spirits, obtaining his living as a faquir, and with such a stock in trade he certainly ought to be, and I believe is, a prosperous beggar.

I was anxious to take one off, more accurately to determine the exact nature of these excrescences, but *no bribe would tempt him to part with even the smallest of them*. The following is the history he gave of himself.

He is a Moplah, about 25 years of age, and was born about twelve miles from Tellicherry; he has been afflicted with tumours ever since a child, but they are now rapidly increasing in numbers and many of them in size. The front of the thorax is literally studded with them; a four-anna piece would find no resting place free of tumours. On the other parts of his body, as the back, abdomen, and thighs, the skin, where free from excrescences, presents small black spots, which he asserts (from past observation) will be the seat of future tumours; if so, he is destined to become if he lives even a greater marvel than he now is, for the skin looks as if it had been rained upon with ink.

Yet these tumours—many of them quite black, all dark, are not, at least in my opinion, melanotic, but simply hypertrophied tissue, some resembling ordinary fatty tumours, some like mere warts.

Molluscum is a name which has been applied by systematic writers to a disease which approaches this more nearly than any other I can fix upon, it is called by some molluscum simplex (Wilson), molluscum contagiosum (Bateman), molluscum sessile, subglobulosum, parvum, pisiforme, molluscum atheroma, ophthalmia, mycosis fungoides.

The word molluscum carries with it no very definite pathological meaning. Dunglison describes the disease "as a cutaneous affection, so called in consequence of its resemblance to certain molluscous animals." The term, however, springs most probably from the original word itself—molluscus (mollis) soft, nux, plin, a kind of nut with a very thin shell, for these tumours undoubtedly much more resemble, as we stated above, nuts, or tree excrescences, than mollusca, as in the case quoted below, "Rhemhardt visu foedum, corpus tectum est verrucis mollibus sive molluscis."

There is a case cited at length by Wilson, and as it presents in many respects a striking similarity to the one under notice, I may be permitted to quote it and compare the two.

"Case observed by Tilesius.*—John Godfrey Rhemhardt was born at Muhlburg, of healthy parents, in 1742. At birth his body was covered with excrescences of small size. When seen by Tilesius in his 50th year, these excrescences varied in size from that of a pea to a pigeon's egg. Their form was various, some being like warts, others oval, others irregular, and others flattened either by the clothes of the patient or by pressure against an adjoining part. The most remarkable of these excrescences was one which was developed from the integument over the ensiform cartilage; it was wallet shaped, tuberculated on the surface, flaccid, and hung as low as the umbilicus. Its tuberculated appearance indicates its constitution of several smaller excrescences. The prevailing colour of the tumours is red; here and there one may be seen of a dull yellow or reddish brown hue; they are spongy and soft in texture, and the skin which supports them is dirty-looking and earthy. "In medio quarundam maximarum excrescentiarum parvum foramen conspicitur, ex quo nigra corpora oblonga, quæ aliis in cute albicantem atque tenerum processum habent, exprimi possunt, quæ vulgo comedones appellantur.

"The excrescences are most numerous by the side of the vertebral column, on the thorax, neck, and sides of the abdomen. On the head one has the appearance of an encysted tumour. Regularly every month some of the tumours become congested and itch greatly, forcing the patient to scratch them violently.

"He is the subject of habitual feverishness, which is increased at each

* Wilson "On Diseases of the Skin," p. 612.

fresh attack of congestion of the tumours, and is accompanied by loss of appetite.

"Rhemhardt is short in stature, has a large head, knees somewhat incurvated, protuberant abdomen, and dull expression of countenance. His position in life is one of indigence and misery. *He has invariably refused to permit the removal or puncture* of one of the tumours, so that their internal structure is entirely unknown."

The man under review is likewise deformed, the shafts of the long bones are bent somewhat, as if in youth he had suffered from rachitis, but here the physical likeness ends; he is in good health, and not by any means in misery, nor is the abdomen protuberant or the head unnaturally large. In Tilesius's case the man invariably refused to permit the removal or puncture of one of the tumours. I was remarkably struck with this coincidence on reading the case, which I did after having seen mine, for this man likewise obstinately refused to have one removed.

In the tumours of the case sketched I saw nothing of the "*parvum foramen ex quo nigra corpora oblonga, &c., exprimi possunt*;" they had to me simply the appearance of soft consistent tumours, irregular in shape, and giving the idea of being composed of elastic tissue, and not the doughy impressionable feel that atheromatous tumours have; nor did they give vent to any discharge, their colour, as I mentioned above, was darker than the man's complexion everywhere, and in many so black as to suggest melanosis.

The largest excrescence in Tilesius's case was from the ensiform cartilage, and was the size of a wallet. This is a vague definition of size, a wallet might be any size. The largest excrescence in the case I have depicted hung from the buttock, or rather over the lumbar vertebræ, and its relative size I have attempted to depict. I regret I did not measure it.

He had, however, numberless tumours much larger than pigeon's eggs, two for instance on the neck behind, one over his abdomen, and one on the calf of his leg, so that our case may be presumed to have presented larger tumours than even Tilesius's famous case.

(C) CONCERNING WOUNDS AND ULCERS.

ART. 112.—*Cases of Complete Recovery from very Severe Incised Wounds.*

By Dr. MONTGOMERY, Staff Assistant-Surgeon H.M.'s Madras Army.

(*Madras Quarterly Journal of Medical Science*, July, 1862.)

CASE 1.—On the 15th July, 1853, I was requested to go over to the hospital (that of H.M. 51st Regiment K. O. L. I., with which I was doing duty) to see a Burman who had been brought in mortally wounded. I found that the wretched man had been in his boat on the Irrawaddy early that morning, and was conveying some vegetables and other saleable commodities from the left bank of the river to the opposite station of Podang-mien. When half-way across he was attacked by dacoits, who, having severely wounded him, robbed him of all his property, and left him literally cut to pieces by their murderous dahls (short swords with wooden handles capable of inflicting most dreadful wounds). Two of the fingers of his right hand were merely left attached by a portion of skin, his left wrist-joint was nearly cut through, an extensive wound in the back allowed the lower angle of the scapula to protrude, the ligamentum nuchæ was almost entirely

cut through, and all the muscles at the back of the neck were divided. He had besides received twelve other dangerous wounds, and one of these had cut off his left ear, which hung on his neck attached merely by a small portion of the lobe, the line of incision being somewhat irregular at this part.

I dressed his wounds, washed and replaced the ear, and fixed it by three points of suture; the wrist of the left arm was placed on a flat splint, and adhesive plaster and cold water dressing used; the wounded fingers were similarly treated; the gaping wounds in the back of the neck and on the lower angle of the scapula could not be brought together by suture, but they were by plaster. *Within one month every one of the wounds were healed, and the man was perfectly well.* The ear united perfectly, but a little crookedly, in consequence of some ulceration having detached the upper point of suture. The wrist retained its mobility, and the fingers likewise. The man had no medicine except two or three purgatives.

CASE 2.—In the month of February, 1854, a Burmese woman, aged 35, was brought in apparently mortally wounded from incised wounds on the back and side of the neck. These had divided the ligamentum nuchæ nearly through, and all the muscles were cut and hacked so as to expose the cervical vertebræ both posteriorly and laterally.

The woman was pulseless from hæmorrhage; she was in the seventh month of pregnancy (her 4th).

She fully recovered without miscarriage or any other mishap, and went her full time, and gave birth to a healthy living child after the usual *roasting* practised on these occasions by the Burmese.

The only conclusion to be drawn from the foregoing would be the conviction that Nature will often effect a cure in almost hopeless cases of injuries of this kind.

ART. 113.—*On Bullet-wound Exploration.*

By Dr. RUFUS K. BROWNE, Brigadier Surgeon, United States Army.

(*Dublin Medical Press*, August 27, 1862.)

Dr. Browne writes :—"An extremely simple change in the usual means to reach the end of a bullet-track—the place of lodgment—or of following the track into and out of the tissues, has enabled me to succeed more frequently than usual; particularly in case the course of the track was either angular, or described a bend, or was in part tortuous. This change is to bend more or less abruptly the probe near its end. If a straight or slightly curved probe be introduced and pushed into the entrance of a bullet-wound, its end will be detained at the first turn, bend, or deflection, which is the beginning of the second direction, and withheld from going further: if, moreover, the effort to carry it beyond be continued, by moving the hand holding the outer end to and fro or around, the inward end will change its position very slightly, if at all, and cannot by means of any movement of its outer end be diverted or carried much, if at all, from the spot of its detention; and should the extension of the wound from here be in a different direction at an angle or abrupt bend, the point will not be turned to engage the continuation of the track. If, however, a bend exist near the probed exploring end, so abrupt as to form an apex, this will rest against a variable spot in

the wall of the track, above what would be in the first instance the point of detention; but in the latter instance, if any detention occur, when the hand is moved to and fro, the apex or the bend will carry the point in a different direction and into any part of the track beyond which it continues in that direction. In all the wounded by bullets which reached the Naval Hospital, Portsmouth, on the 9th of June, nearly 500, in every bullet-wound which I saw and examined, this simple expedient, of which I made no mention, enabled me to follow the track, whether it terminated in the tissues or found a canal through and out of them, except in cases where the track opened into the thoracic cavity, or terminated in the pulmonary tissue. This expedient will be found to succeed perhaps in all cases where the track of the wound turns or bends in two or three directions. The bend in the probe should usually be about the distance from the probe point of the last joint of the finger from its tip. Although previous to being a witness to any bullet-wound I held the idea, having thought of it as an occasional change in the form of the catheter to prevent its becoming arrested in the urethra, I have never mentioned it except in one instance. It succeeded readily, when the probe of uniform curve, in the hands of a perfectly skilful explorer, failed.

"The case was a soldier, who, while in battle, resting upon his right knee, the other flexed at a right angle, was struck by a Minié ball, which passed into the anterior muscle of the left hip, through behind the pubes, into and out of the bladder, and lodged a little to the right of the raphe, in the perineal fascia. Here there was a large fistulous gap leading to the neck of the bladder, from which dribbled the urine, and which in fact turned out to be of fistulous character, the ball being found just above and behind its edge. At first the professional examiners, three, could not content themselves that one ball had made so various a wound—and the only way of ascertaining the fact was to explore and find a continuous canal from the orifice in the thighs to the fistulous opening of which these two points were the undivided termini. The exploration by the probe as usual was done, but failed to carry the probe beyond a certain point. The surgeon in charge, a most skilful and successful one, was abandoning the attempt when permission was granted me to explore. The slight bend in the catheter I have stated was made, and the end of the probe without detention in the track appeared through the fistulous opening. The first exploration had been arrested by an abrupt turn about the middle of the track, and this involved a second turn a little beyond. This expedient is simple, but perhaps will be found successful in all hands. Of course in the exploration of wounds, we all need to practise the lessons we have been taught respecting the handling in the introduction of the catheter. *No force must be used.* That I have never seen the probe used in bullet-wounds as the catheter *should* be, is a very unpleasant experience in the army. I am satisfied that the best probe in any bullet-wound but very superficial ones, is the soft metallic or lead probe—not because it is softer to the tissues, but because it can be instantly curved or bent, even when a part of its length is in the

track of a wound. And the only forceps which should be used for the withdrawing of bullets is the mouse-tooth forceps (Thomas) described by my friend Professor Hamilton, Brigade-Surgeon, U.S.A. The spoonbill or the dressing forceps can scarcely be prevented from inclosing in their grasp of the bullet (when that is accomplished) more or less of the tissue which closed partly over the bullet; and this is to be torn by traction from its connexion in the withdrawal of the bullet. They are best for the removal of spicula of bone, cloth, coagula, or anatomical *débris*."

ART. 114.—*Report on Syphilis, with Reference to the More Mixed and Unusual Forms of the Primary Symptoms.*

By DR. MARSTON, Assistant-Surgeon Royal Artillery.

(*Proceedings of the Royal Medico-Chirurgical Society, June 24, 1862.*)

The writer commences his paper with a *résumé* of the modern doctrines usually held and taught. When model cases present themselves, the diagnosis and prognosis are easy. It is the frequent occurrence of mixed cases—sores of various kinds and forms—that offer such great difficulty. Putting aside all questions as to the objective symptoms by which an infecting can be differentiated from a non-infecting sore, there could be no doubt that these two varieties or species existed, as proved by daily observation, the results of confrontation, and the very important results obtained from Danielsen's inoculation of patients suffering from Norwegian leprosy with chancreous virus, one case only having been followed by constitutional symptoms, in which the virus had been obtained from an indurated sore.

The author, taking typical examples, gives the leading pathological characteristics of the two forms of sore as follows:—What peculiarly marks the soft chancre is a solution of continuity of the soft parts by an ulceration and suppuration, having in its origin and progress an intimate connexion with an active inflammatory process. In the infecting form, a slower process of abnormal nutrition in the part affected is observed, by which is induced a localized product, partaking of the nature of a morbid growth, without any necessary relation to inflammatory phenomena. For these reasons it is relatively chronic in its source, and capable of removal by a gradual process of absorption, without the production of pus, or any loss of substance. In the first, the virus (as holds in the case of a mechanical substance) might pass by the lymphatics to be arrested at the nearest gland, there inducing a repetition of the inflammatory process it had originally caused; while in the second the sphere of influence exerted by the virus was much wider, affecting the vascular as well as the lymphatic absorbents, by which it happens that the blood elements, passing through both chancre and gland tissue, became affected.

Dr. Marston then speaks of the limited character of the ulceration or erosion, compared with the deeper and wider seat of the

induration. From an infecting sore so characterized, some epidermic or epithelial scales would necessarily be mixed with the scanty excretion obtained from its surface, in addition to lymph cells, which would approach the characters of pus, as the infecting possessed the characters of the non-infecting sore—viz., depth of erosion, activity of progress, and vascularity. The line of demarcation between the two sores, however, the author thinks, could not be easily drawn from the character of the discharge alone.

Mr. Henry Lee's important observation in 1856, as to the non-auto-inoculability of the indurated sores, is next remarked upon. Alluding to the views promulgated by De Méric, Diday, De Clerc, Rollet, and particularly the exhaustive series of observations made by Bassereau upon a duality of the virus, as the cause of the differences observed in the infecting and non-infecting sores, he cites in illustration the case of a battery stationed at Christchurch. Amongst the many instances of venereal disease, only one ulcer proved to be of the infecting type, and in it the virus was obtained from a London source.

The writer then alludes to the modifications in the character of venereal sores effected by the physiological properties of tissue, the effects of irritation and indolence, giving some cases in illustration of his observations. Having premised thus much as essential to the right appreciation of what follows, the author treats of—

1. The varieties of infecting sore.
2. The results obtained by auto-inoculation.
3. The occurrence of syphilitic infection after suppurating bubo.
4. The occurrence of constitutional symptoms following urethral discharge clinically identical with gonorrhœa.
5. The bubon d'emblée.
6. The periods of incubation preceding the appearance of the two kinds of venereal sores, and the absence of any guarantee against constitutional infection by any abortive treatment applied to the primary syphilitic lesion.

1. Excluding the Hunterian chancre, the ulcers possessing specific induration, the author makes some observations upon superficial erosions, involving but a part of the integument or mucous membrane, and leaving scarcely any induration about the cicatrix, as the frequent precursors of syphilitic induration. He alludes to the different structures upon which such might appear. Ulceration (as generally understood) might scarcely affect such sores at all. When the induration proper to the specific morbid process had its seat in the hardness belonging to the seat of the sore, whether arising from the physiological properties of the affected tissues or induced by irritation, an infecting sore, most difficult of diagnosis, resulted. When, moreover, the subject of the disease had a hybrid affection—i.e., sores of different characters upon the same spot, a pus-producing and infecting sore, capable of auto-inoculation, and attended with suppurating bubo, might be present.

Under the head of "observed facts," the author cites the following cases:—

1. The infection of a man by his wife, in whom a very trivial

erosion existed upon the inner aspect of the left labium, without induration or appreciable discharge.

2. The appearance of strictly circumscribed elevation upon the inner aspect of the prepuce of an officer, the epithelium upon which appeared dull; no trace of ulceration appearing until the part was irritated by the application of a powder, and then very limited in extent. There was a symmetrical enlargement of the inguinal glands, and he afterwards suffered from psoriasis palmaris, &c.

3. A case of numerous superficial erosions upon the surface of the glands healing by local treatment. Eighteen days afterwards the appearance of a Hunterian chancre upon the prepuce, from which last inoculation proved unsuccessful.

4. Two soft, purulent, inoculable sores upon the fossa glandis, which twenty-two days afterwards became indurated; secondary symptoms following.

5. Three soft chancres upon the prepuce, a suppurating bubo in the right groin, and inflamed glands in the left. Inoculation from the sores and bubo proved successful. Sixteen days after the appearance of the disease, and beneath the surface of one healed sore, specific induration appeared, and was healed by mercury.

6. An unbroken pustule seated upon the prepuce, and having an inflamed base. After inoculating the integument of the thigh with the pus, the original pustule destroyed by potassa fusa. The result of inoculation and re-inoculation successful, as far as regards the production of a soft sore, which was destroyed by caustic. As the slough separated from the original seat of disease, induration was apparent around the periphery; symmetrical affection of the inguinal glands; subsequent evolution of secondary symptoms.

7. A case of indurated chancre upon the face, the result of inoculation, by the patient's finger, of a spot of herpes, followed by enlarged submaxillary gland and secondary symptoms.

Upon these cases the writer makes the following remarks:—

CASE I.—The relative rarity of typical indurated chancre in women has been the subject of frequent remark. It would appear that the syphilitic virus falling upon the vascular and loose glandular tissues of the vulva, gave rise to a product identical with what is observed upon the glands penis of the male, and, equally with it, to be often deficient of any peripheral induration.

CASES 2, 3, 4, 5, and 6, taken together, are capable of receiving one of two explanations. 1st. That they are instances of double infection; the soft non-infecting sore, apparently early, suppurating, and auto-inoculable, with the subsequent appearance of the indurated infecting sore upon the same part, or in the same neighbourhood. Or 2ndly. That the inoculation of pus obtained from an indurated sore in an inflamed or irritated condition, gave rise to a pus-producing erosion, which in time became affected with the specific hardness.

Mr. Henry Lee has shown that the infecting chancre is incapable of auto-inoculation; but if such be made first to yield pus, auto-inoculation would succeed, as far as the production of a pustule or soft ulcer. When the author comes to the subject of inoculation he would have occasion to remark upon the occasional production of

an abortive form of pustule, from the inoculation of other than specific pus.

Thus Dr. Marston refers case 6 to a pus-inoculation from an indurated sore, and thinks that the pustule and inflamed base resulted from the reaction of that secretion, while the induration was the result of the syphilitic virus obtained through that pus as a vehicle. He refers cases 4 and 5 to hybrid sores, the result of a double infection.

Some observations are made, and cases cited by the author in illustration of the fact, that sores upon the integument of the sheath of the penis were commonly infecting. In that situation he has observed secondary infection after—1st. The most superficial indolent erosion without appreciable induration (or with it of such slight degree and duration as to have escaped detection), and with little or no suppuration. 2nd. The same with a well-defined, strictly limited, and very narrow rim of induration. 3rd. Sores, appearing like boils or spots of ecthyma, sometimes covered with a scab; discharging pus, indolent, with raised and prominent edges, honey-combed-looking base, and large, but ill-defined hardness. (The author purposely excludes that form of sore appearing as a well-defined, flattened, indolent induration, because he desires to avoid model cases.) He next adverts to the fact, that many of these sores leave scarcely any trace of induration in their cicatrices, but that at first a dull, reddish-brown discoloration remained at the seat of the cicatrix, which ultimately became whiter in tint than the surrounding skin, with faint depressions and radiating lines, marking a circular, stellate form of cicatrix. The result of much observation has left a firm impression upon the author's mind that secondary infection is the common result of almost any variety of venereal sore seated upon this part of the organ.

In soldiers suffering from constitutional syphilis it is very common to find the above marks of cicatrices upon the integument of the penis. Of six cases, of which notes were kept, five afterwards had secondary symptoms, and in two of the six suppuration appeared over the seat of an inflamed lymphatic upon the dorsum of the penis.

ART. 115.—*On the Distinction of Chancre from Syphilis.*

By Dr. REDER.

(*Schmidt's Jahrb.*, No. 8, 1862.)

Dr. Reder re-states the question as to the unity or duality of the infection by chancres, thus: Are the contagions of syphilis and of the chancre identical; are they altogether distinct processes which are unassociated except in extraordinary circumstances, or do they stand in such a necessary relation that syphilis may follow any chancre under favouring circumstances?

If this question be answered in favour of duality, then every infecting chancre may be considered the product of two processes, one of which (the chancreous) is quickly developed, while the other (the syphilitic) more slowly produces its appropriate symptoms.

The grounds for this view are the following:—1. The chancre remains a mere local affection in the majority of cases, and we can perceive no cause why in one case the morbid action should be limited, in another should overspread the whole organization. Neither the site of the ulcer nor its size nor duration, the manner of life of the patient, nor the treatment, nor any other constant external circumstances, have any such influence. 2. Were syphilis, according to the common theory, the result of the resorption of the chancre pus, the probability of its supervention ought, *ceteris paribus*, to be proportioned to the size, number, and duration of the local sores. Experience shows plainly the reverse. 3. Although it often appears as if syphilis were developed from the contagion of a simple chancre—a circumstance for which another explanation than the identity of the contagions is possible—no one has proved that by inoculation with secondary products it is possible to produce a simple chancre upon a healthy man. 4. The simple chancre multiplies itself as often in syphilitic as in healthy individuals, as the results of syphilization prove. But these individuals are not susceptible of infection with the contagion of secondary syphilis. 5. Infecting sores on the genitals have been spread over many places, at the same time, and yet there was no evidence of syphilis. 6. It is historically true, that infecting sores, and infecting discharges from the genitals, have even rendered police interference necessary, although there was no discoverable proof that at that time, and in those circumstances, any disease like syphilis prevailed. 7. Finally, the following differences between syphilis and chancre are to be noted:—(A) Chancre, even when not fully developed, is communicable to animals which are proof against the contagion of syphilis. (B) Chancre always implies a destruction of tissue—syphilis causes, in its first stages, new growths (condylomata) or increased secretion of normal elements (epidermis-scales, osteophytes).

(D) CONCERNING DISEASES AND INJURIES OF VESSELS.

ART. 116.—*Proposed Operation for the Removal of Embolia in Accessible Arteries.*

By Dr. WILLIAMS, of Swansea.

(*Lancet*, July 1, 1862.)

Dr. Williams writes:—"Two interesting cases of embolia in the femoral artery are published in your *Mirror* of last week; one under the care of Mr. Prescott Hewett at St. George's, and the other under that of Mr. Erichsen at University College Hospital. In both death by gangrene took place. In the former, amputation of the limb was contemplated, but not adopted; in the latter it was actually put in practice. A similar case came under my notice some time since, in which we felt certain that a plug of fibrin had become impacted in the femoral artery at a short distance below Poupart's ligament. To my friend who was with me in attendance I proposed that the following operation for the removal and extraction of the embolia should be practised:—

Operation.—Let the trunk of the artery at the point at which the pulsation ceases be laid bare to the linear extent of about two inches; then, by means of sharp-cutting scissors (taking care that the point of the instrument does not displace the plug), let a straight *longitudinal* incision of the required length be made through the coats of the vessel—thus laying open the tubular channel of the artery and exposing the plug, which now may be removed by aid of a properly constructed forceps. This being accomplished, the edges of the incision in the coats of the vessel should be accurately brought into contact, and held in apposition by means of an appropriately contrived suture of silver wire. In our case, however, the friends would not consent to an operation. The patient recovered.

"I am not aware that the proposed operation has been thought of by any surgeon. I suggest it as worthy of trial in these and such cases in which the artery is accessible, and the locality of the embolia can be determined with fair certainty. It recommends itself as a harmless measure; and offers to the surgeon a feasible mode of restoring the tubular continuity of the vessel, and therefore of the current of the circulation. It is my belief that an incision made parallel with the axis of the vessel, provided the edges be carefully brought into apposition, *would not be followed by hæmorrhage*. If surgeons reflect on the terribleness of the consequences which now follow upon the plugging of an artery—amputation and gangrene—they will admit that the operation as explained is not only justifiable, but strong in its claims to practical adoption."

ART. 117.—*On the Treatment of Varicose Veins by a New and Simple Instrument.*

By Dr. JAMES MORTON, Surgeon to the Glasgow Royal Infirmary.

(*Glasgow Medical Journal*, July, 1862.)

This instrument is a needle on the same principle as Mr. Startin's needle. "At first," says Dr. Morton, "we used a common straight needle, with a piece of bougie or elastic catheter over the vein and a ligature twisted, figure of 8 fashion, over this and round the ends of the needle. Then the idea of what we may call the safety needle occurred to me, suggested as it was by the safety pin in common use for ladies' shawls and in the dresses of infants: and this needle was first used with a piece of bougie as a pad, or a small piece of lint rolled together. This was somewhat apt to move from its place, or might be moved by the patient, and then we thought of making a kind of indentation in the upper arm of the needle in which this might rest, and narrowing the fenestra so as to insure steady pressure; and while thinking of this, a needle was handed to me by one of my dressers, Mr. C. J. Russell, affording a fixed pad, a part of the instrument itself, consequently rendering it impossible for the patient to remove it. Startin's needle is on a similar principle, but more apt to press on the skin; and another is mentioned in the *Medical Gazette* some months ago."

CASE 1.—November 4th.—William J., aged 52, has suffered from various ulcers on both legs for the last seven years. December 20.—The ulcers being now perfectly healed, the operation for occlusion of the varicose veins in the left leg was performed by Dr. Morton. The pad was made by twisting the wire upon itself in the form of a small drum, and covering this with chamois leather. All the operations after this were performed with an improvement upon the patent pin, the pad being part of the instrument itself. The patient having been placed under the influence of chloroform, the circulation in six of the veins was completely retarded, three of them by one, and three by another method. The first, which is original, was performed by an instrument after the model of a new pin, termed, I believe, the "safety pin." The point of this instrument was introduced below the vein, and fastened to the more solid end by means of a spring. A pad of lint being placed immediately over the vein, pressure sufficient to command the circulation was at once obtained. The others were occluded by means of an ordinary needle, a piece of elastic catheter over veins, and a twisted suture. 24th.—Little or no irritation has as yet set in; complains of no pain or uneasiness. 29.—The needles were removed to-day, and the operation found to be successful. January 1st.—Dismissed well. 8th.—Has found himself so much benefited by the last operation, that he has returned to have the same performed on the right leg. This was accordingly done upon the 9th, and upon the 17th the needles were removed. In neither of the operations was there any irritation or suppuration set up.

CASE 2.—December 6th.—James M'C., aged 52, has for many years suffered from a very large excavated ulcer depending on a very highly varicose condition of the veins of the left leg. January 14th.—The ulcer being now comparatively well, five needles were to-day introduced into as many veins, and at the end of eight days removed, having perfectly occluded the veins, and having set up but a very trifling amount of irritation. 25th.—Four needles were again introduced for the purpose of compressing four veins which had been left untouched. These were removed at the end of the third day, as there was some appearance of suppuration setting in. February 1st.—All symptoms of irritation have abated, and the two operations are found to be perfectly successful.

CASE 3.—November 30th.—William D., aged 44, has for many years suffered from a highly varicose state of the veins of both legs. Was admitted to the house on account of an attack of erysipelas. Upon the erysipelas disappearing the legs remained obstinately swollen, when it was determined to perform the operation of occlusion of the veins. January 25th.—This was accordingly done this morning, three needles being introduced into the right, and five into the left leg. 30th.—The needles were to-day removed. No local irritation has been set up. February 8th.—The operation has been perfectly successful, and he is dismissed cured.

CASE 4.—January 23rd.—John M'K., aged 21, has suffered for several months from a small ulcer on the right leg. The veins, however, in both are varicose. February 20th.—It was thought advisable to operate upon the varicose veins. This was done in the usual way; two needles were introduced into the left, and three into the right leg. These were removed eight days afterwards; the operation was successful, and the local irritation slight.

(E) CONCERNING FRACTURES AND DISLOCATIONS.

ART. 118.—*On Old Dislocations, and on their Reduction.*

By Mr. BRODHURST, Asst.-Surg. to the Orthopædic Hospital, &c.

(Proceedings of the Royal Medico-Chirurgical Society, June 10, 1862.)

The object of this communication is to show that dislocations might with great advantage be reduced at a much later period, now that chloroform is in use, than formerly; yet the author contends that this fact has in great measure been overlooked, and that the teaching of Sir Astley Cooper—namely, eight weeks for dislocations of the hip, and three months for those of the shoulder, is still all but universally observed. He refers to the obstacles to the reduction of old dislocations, and he then considers the means of overcoming them. He points out two great distinguishing features of old dislocations—namely, on the one hand, the recovery of motion and the formation of a new joint; and, on the other, a painful position of the head of the bone, together with a motionless condition of the limb: and he suggests that interference is to be deprecated when motion is being restored and the new joint is becoming perfect, but that reduction may at any time be attempted whilst the limb remains motionless and painful. A case is related of a muscular man, fifty-three years of age, who, having dislocated the humerus beneath the pectoral muscle, came under the author's notice when the dislocation had existed nearly six months. The author reduced it on the 175th day. The reduction was most easy and immediate; there was no disposition for the bone again to become displaced, and the patient recovered almost the entire use of the limb. In conclusion, it is observed that extension ought not to be employed primarily in the reduction of old dislocations, and the argument adduced is as follows:—The adhesions round the head of the bone must always be ruptured prior to reduction. If they are ruptured by the use of the pulleys, so much force is required in extension, when the dislocation is old and the adhesions are tough, that there is danger of rupturing the muscles and breaking the neck of the bone; but if they are ruptured by to-and-fro movements the pulleys are unnecessary to replace the limb, traction and manipulation being sufficient for this purpose. The author sums up thus:—"With chloroform, no precise time can be set as a limit to the reduction of an old dislocation. When useful motion is being regained—when the new joint is being formed and pain has subsided, attempts at reduction may be deemed unjustifiable; but while the limb remains painful and motionless the dislocation is reducible, and it ought to be reduced."

ART. 119.—*On Excision of some of the Smaller Joints.*

By Mr. THOMAS ANNANDALE.

(Edinburgh Medical Journal, September, 1862.)

Excision of the larger joints is an operation which is now firmly established, and is most justly considered to be one of the greatest

improvements in conservative surgery; but in regard to the smaller joints, this operation has as yet attracted so very little attention, that it has induced me to make the following remarks.

The operation may often be practised with advantage in cases of compound fractures, dislocations, or wounds of these articulations; and the successful results obtained in the cases related will tend to confirm this opinion.

In cases where these joints are affected with disease, the operation is not advisable, for the pathology of such diseases shows that most frequently the articulation is only secondarily involved, and consequently, unless the whole bone be removed, the operation is ineffectual. But if a whole phalanx or metacarpal bone be taken away, it leaves the remaining portion useless, and by no means ornamental.

It is quite possible that the cases mentioned might have recovered without any operation having been performed, but they could not have done so without causing permanent stiffness of the joints concerned, and this would have left the fingers in a most inefficient state.

It is also well known that, in injuries opening into joints, the inflammation which almost invariably follows is severe in its character, and appears to be aggravated by the tension of the parts around, owing, no doubt, to the unyielding nature of the structures concerned in the formation of the joint. By removing a portion of the bones which assist in forming the joint injured, we not only diminish the severity of the inflammatory attack, but also prevent, or at any rate diminish, the stiffness which would otherwise result.

CASE 1.—J. M., æt. 16, admitted into the Royal Infirmary, Edinburgh, Feb. 18, 1861, for an injury which he had received on the outer side of the wrist joint, from a stroke by the sharp edge of an axe.

On admission, there was a wound about an inch in length across the outer aspect of the carpo-metacarpal joint of the thumb; the wound communicated with this articulation, and had partially divided the extensor tendons of the thumb; the end of the metacarpal bone was projecting through this opening. An attempt was made to reduce the protruded bone, but it always slipped out of its place again as soon as the extending force was removed. I therefore sawed off the head of the metacarpal bone, and brought the edges of the wound together with two silver stitches. The wound healed rapidly, and the patient was dismissed cured on the 1st of March, his thumb having all its movements, with only very little stiffness.

CASE 2.—G. M., æt. 7, admitted into the Royal Infirmary on April 1, 1861, having injured his hand in a saw-mill, half an hour before admission.

On admission, there was a wound across the back of the hand; the extensor tendons of all the fingers were divided; the metacarpo-phalangeal joints opened into, and the phalanges of the last two fingers sawn through immediately above their articular surfaces, so that the whole anterior portion of the hand was only attached to the posterior portion by little more than the flexor tendons and skin on the palm of the hand; the thumb was uninjured.

Thinking it right to give the hand a chance, I cut off the articular extremities of all the joints; the hand was then placed on a splint, and light

dressing applied. The wound healed well ; and on the 8th of May, 1861, the patient was dismissed quite well, having a considerable amount of movement in the fingers ; he was able to flex them, although not quite to their full extent, and grasp objects firmly, if not very small.

July 2, 1862.—To-day, I saw the patient. The appearance of the hand is more natural than I could possibly have anticipated ; and, except that it is a little shorter, it is as useful as its fellow.

(F) CONCERNING OPERATIONS AND INSTRUMENTS.

ART. 120.—*Statistics of Amputations in the Hospitals of Paris.*

By M. TRELAT.

(*Gazette Hebdomadaire de Médecine et Chirurgie*, March 28, 1862.)

On the 25th March, 1862, M. Trelat communicated to the Academy of Medicine of France the statistical results of the greater amputations in the Parisian hospitals. These statistics embrace the following hospitals:—Hôtel-Dieu, from 1850 to 1861 inclusive, 11 years; Pitié, from 1851 to 1861, 10 years; Charité, from 1850 to 1861, 11 years; Saint Antoine, from 1853 to 1861, 9 years; Necker, from 1848 to 1861, 14 years; Beaujon, from 1850 to 1861, 11 years; Lariboisière, from 1854 to 1861, 8 years; l'Hôpital des Cliniques, from 1855 to 1861, 7 years; l'Hôpital des Enfants Malades, from 1851 to 1861, 10 years; Sainte Eugénie, from 1854 to 1861, 8 years—in all, 99 years, almost a century of hospital practice.

Excluding some exceptional cases which are pointed out and disregarded, there were 1144 amputations, as follows: at the hip-joint, 3; thigh, 360; at the knee-joint, 4; leg, 418; foot, 116; shoulder-joint, 27; arm, 141; elbow-joint, 4; forearm, 44; hand, 27.

Of the whole number, death resulted in 522, or in 45·6 per cent.

Pathological amputations, 568; deaths 223, or 41 per cent.

Traumatic amputations, 470; deaths 261, or 55·5 per cent.

Amputations from undetermined causes, 28 deaths, or 26 per cent. The smallness of this mortality results from there being included in this category a proportionably great number of children.

The mortality among males was 438 in 908 operations, or 48·2 per cent.; among females, 84 in 236 amputations, or 35·5 per cent. M. Trelat explains this difference by the relative fewness of operations and of severe wounds in the female wards.

As to age, that which furnishes the smallest mortality is that from 5 to 15 years, viz., 18·9 per cent., or 15·2 in the pathological amputations, and 16·6 in the traumatic. The mortality previous to the fifth year of life is nearly the same as that between the ages of 15 and 30; after the 15th year it increases regularly and without interruption, whatever may be the nature of the amputation or the sex of the patient. Beyond 70 years of age it becomes so large as 95 per cent., that is, one only recovers of twenty operated on; hence M. T. reprobates amputation in those above 70 years of age.

ART. 121.—*A New Transfusion Apparatus.*

By Dr. HAMILTON.

(Edinburgh Medical Journal, October, 1862.)

At a recent meeting of the Edinburgh Obstetrical Society, Dr. Hamilton exhibited an apparatus which he had contrived for the performance of transfusion, and gave the following account of it:—

“This apparatus consists of a funnel for receiving the blood, say four inches broad at the mouth, with a stop-cock attached to it; of a small tube, for introduction into the vein of the patient, also having a stop-cock attached to it; and of an india-rubber tube, two feet long, for connecting the two. In operating with this instrument, I propose that the patient should be placed at a lower level than the person from whom the blood is to be drawn, so that we may have, first, the force of gravitation to impel the blood forwards; and second, that we may thus effectually provide for the non-entrance of air into the veins, as the air, being the lighter body, must always keep on the surface. In order to test the practical working of this instrument I got two dogs, upon which I performed a few experiments. Having heated the instrument, by pouring warmish water through it, in the first experiment I opened the jugular vein of the dog from which the blood was to be taken, and allowed the blood to issue from the tubule before this was introduced into the same vein of the other dog. I did this in order to expel the air, but found that, during the time thus lost, the blood in the funnel and tube had coagulated. In my next experiment I avoided the chance of this happening, by filling the tube and the lower portion of the funnel with warmish water, introducing the tubule into the vein, and then opening the vein of the dog from which the blood was to be drawn. In this way a small quantity of the blood ran off, but still coagulation took place too rapidly to make the experiment satisfactory. In my third experiment I used simply lukewarm water, and I then found I could with ease inject any quantity I desired. I now tried the action of the apparatus with human blood. I first filled it, as before, with lukewarm water, and shut the stop-cocks; and, just before opening the vein of the patient, emptied out the whole except what remained in the tube and bottom of the funnel, which I afterwards found amounted to about two drachms. As soon as two or three drachms of blood had been drawn, I opened both stop-cocks, and allowed it to run off, and I found that it ran in a continuous stream into a plate, until I had obtained the quantity I wished to abstract—viz., about eighteen ounces. I found that, by regulating the stop-cock connected with the funnel, I could, with great ease, keep only a few drachms in the funnel, thus making the transfer from the patient to the plate almost immediate. I repeated this experiment with exactly the same result: the blood in the plate presenting next day, as far as I could judge, precisely the same appearance as if it had been drawn direct from the patient. I find that water falls through the whole length of the tube in about two and a-half seconds, and an ounce of water runs off

from the funnel in eight seconds; so that the exposure of the blood, where the stream is kept continuous, must be very trifling, and probably will be found, when the instrument used is made entirely, or chiefly, of non-conducting materials, neither to lower its temperature much nor to alter unfavourably its vital properties. Combining the results of the two sets of experiments, there seems to be little reason to doubt that transfusion of blood, or injection of water or other fluids, might with ease be effected with this instrument in the human subject or in animals. Transfusion with dog's blood is much more difficult than where human blood is employed. Dr. Blundell found that the first coagulates in ten seconds, whereas the latter takes sixty seconds to coagulate; and hence, no doubt, the reason why he employed human blood to transfuse into dogs.

"My feeling is, that many lives are annually lost, in obstetric practice alone, from loss of blood; and looking at the recorded cases I have seen in which transfusion had been employed, it seems to me that they offer great encouragement to its more frequent use. The great obstacles I think hitherto to using it have been, the complexity and expense of the apparatus used, the dread of introducing air in dangerous quantities into the veins from the use of the syringe, and timidity on the part of the surgeon, from want of dexterity or want of practice, in performing the operation. If my anticipations be correct, such an instrument as I have exhibited may remove the two former obstacles, for it is so simple that it can with the greatest ease be cleaned and kept in order; it will cost only a few shillings, and could therefore be in every practitioner's possession: and, with the most ordinary care, it renders impossible the entrance of air into the veins. As to the third obstacle I have mentioned, practitioners could easily remove it by performing a few experiments on dogs, with water instead of blood: the injection of a moderate quantity at a proper temperature apparently doing them no harm. I will only add the usual caution given in these cases, that the experimenter be careful to expose properly the vein before incising it, otherwise he will run great risk of injecting the fluid into the cellular tissue instead of the vein. I was assisted in my experiments by Mr. Heriot, veterinary surgeon, Falkirk, who secured the dogs, and applied the ligature to 'start' the vein. After shaving off the hair, I pinched up the skin over the vein with my left thumb and forefinger, made an incision with a sharp curved bistoury in the course of the vein, gently dissected the cellular tissue from the vein, and then opened it.

"After I had made the experiments I have detailed, I found, on consulting Dr. Blundell's paper on transfusion and his '*Principles of Midwifery*,' published in 1839, that he also had the idea that an instrument of a simple kind might be used in transfusion instead of the syringe, but, curiously enough, he seems never to have constructed or employed it. In his '*Principles of Midwifery*,' p. 255, he says, 'transfusion from artery to vein, or perhaps even from vein to vein, might be accomplished by tubule simply;' that is, as I understand it, by connecting the two together; and again, 'a fall of two or three inches, perhaps less, is sufficient to move by gravita-

tion the blood into the vein.' Dr. Blundell proposes to call this a 'gravitator,' and the name seems a very appropriate one both for his and my own instrument. Instead of two or three inches of a fall, however, I think that in my instrument great advantage will result from having the india-rubber tube two feet in length, as this both gives facility in adapting the instrument, and furnishes no more than enough of gravitating power for propelling the fluid, as a substitute for the syringe. It seems to me, however, that quite sufficient force can be thus acquired for what is wanted, of a kind, too, somewhat like the equable gentle force employed by nature in the venous circulation; and, until coagulation takes place, there need be little fear of the flow of blood keeping continuous. If coagulation has taken place, any exertion of force with a syringe or otherwise would only, I think, be likely to do harm, by propelling coagula into the veins. In such a case, much the best plan, I think, would be at once to remove the instrument, clean it out, and re-apply it.

"In transfusing in the human subject, I would be inclined to proceed in the same way as I did in my second experiment on the dogs. Filling the instrument with water of the proper temperature, and introducing the tube into the vein of the patient before the supplying vein is opened, will both prevent any material abstraction of heat from the blood, and will also obviate the risk of coagulation, should any unexpected delay occur. The two drachms of water that would thus be first introduced into the veins, would probably be beneficial rather than otherwise. In the instrument I have used the two stop-cocks and the tube to introduce into the vein are metallic, but Messrs. Thornton inform me that these, as well as the funnel, could be made of vulcanite, one of the best materials I know of for such a purpose, being both a good non-conductor of heat, and little liable to alteration of its surface. Any one wishing to possess such an instrument may obtain it by applying to Messrs. Thornton, India-rubber Warehouse, Princes-street, Edinburgh."

ART. 122.—*On a New Fracture Apparatus.*

By MR. C. EVANS, House-Surgeon to the Birkenhead Hospital.
(*Lancet*, May 10, 1862.)

CASE.—Thomas C., aged fifteen, was admitted into the Birkenhead Hospital on the 4th of December, 1860, with severe injury to the right arm, consisting of a compound comminuted fracture into the shoulder-joint, a comminuted fracture at the middle of the humerus, a compound fracture into the elbow-joint, and a simple fracture of the radius. The lesion of the soft parts was most extensive, the principal nerves and vessels in the axilla being exposed.

At the consultation of the surgical officers it was proposed to remove the arm at the shoulder-joint. Fully admitting the seriousness of the case, I begged to be allowed to try first the effect of my new splint for a few days, believing that it presented advantages which could not be secured by any of the usual appliances. I am happy to say that my anticipations were fully realized, and at the end of four months the lad left the hospital with a

thoroughly useful limb. I saw this lad after the lapse of twelve months, when it was difficult to detect any marked difference between his two arms.

Since the above case occurred, I have used my splint in four other instances, where, though there was not the same amount of injury, unusual mischief existed as well in the shoulder and elbow joints as elsewhere in the limbs, with equally satisfactory results.

The splint to which I have referred consists of a bar of iron one inch wide and an eighth of an inch thick, bent at the shoulder and elbow joints, and armed with five carefully covered pads, two of these being fixed, one at each extremity of the bar, and three of them capable of sliding into various positions. The upper or shoulder pad, with a basis of flat metal, is so bent as to fit accurately on the shoulder, extending over the scapula and clavicle, and arresting, by the assistance of a strap passing through the opposite axilla and buckled by its ends to the shoulder pad, their movements. The other fixed pad is intended, by being secured round the wrist, to prevent all shifting of the instrument or motion in the injured limb. The other three pads are made moveable—first to facilitate the dressing of the wounds where these exist, and secondly, to assist the close apposition of the limb to the splint. So far as my observation has extended, I know of no form of injury to either the shoulder or arm, including fracture of the clavicle, to which it is not better suited than any form of apparatus that has been hitherto employed.

This splint has been placed in the International Exhibition, forming one of the objects in Class 17, No. III.

ART. 123.—*On the Substitution of Iron Wire for Thread and Silk as Ligature for Arteries.*

By Mr. THOMAS NUNNELEY, of Leeds.

(*Lancet*, May 10, 1862.)

Without endorsing to the full extent the views of Dr. Simpson as to the injurious effects of thread ligatures and sutures in wounds, there is, Mr. Nunneley apprehends, a very general agreement in opinion amongst surgeons that the iron-wire suture introduced by him does, in many cases, possess advantages which are not unimportant.

Though useful as a suture, Dr. Simpson's wire is not applicable as a ligature for vessels or other small objects, as it is not sufficiently flexible to allow of its being drawn home in a knot, so as either to cut equally and efficiently through the inner coats, or to certainly close the bleeding orifice without fear of its slipping off. Hence, probably, Dr. Simpson's idea of employing lateral pressure by a steel pin—acupressure, as he named the practice—for closing an open artery. Though this method has been tried in some cases with success, it is not one which either has or is likely to obtain general employment, as few men will dare to leave a divided large artery so apparently insecure, and presenting so little of the conditions shown by research and practice to be essential for permanent closure.

For some time past Mr. Nunneley has been endeavouring to procure iron-wire sufficiently fine, strong, and flexible to admit of its being used instead of thread ligatures. He has succeeded in getting drawn some which possesses these qualities (and which, he

is told, is some of the finest ever drawn). There are two thicknesses: one is probably about No. 42 or 43; the thicker portion is No. 37. The finer is adapted for vessels smaller than the brachial artery, and might possibly be used efficiently for larger; but for these Mr. Nunneley would rather employ the thicker wire, since it is considerably stronger than the other, and yet is sufficiently fine and flexible to admit of being drawn home in a knot. Both will be found to cut well through the inner coats of a vessel, leaving the outer one entire, upon which the wire holds well. In using the wire ligature too much force must not be employed, or it will cut itself out; and some little care in using a steady, equable pull is necessary, particularly when securing the knot, for by a sudden jerk the wire is apt to give way at or near the second twist of the knot. This should be avoided; for though Mr. Nunneley has found in many experiments upon the dead subject, when he has purposely broken the wire in this manner, that the knot even then commonly is fast, still it would not be so secure as if both ends were entire. One end of the wire may be cut off in the usual way, or both may be cut close off, as has been recommended and practised by Dr. Sims with silver wire. The former plan is preferred; for in the latter, contrary to what has been asserted, the wire has not uniformly been found to remain quiescent, or without exciting irritation and suppuration. With the view of rendering the iron wire still more flexible, Mr. Nunneley had it annealed, by which it becomes almost as flexible as thread, but this is at the expense of its strength, so much so, that though No. 37 retains sufficient tenacity to be employed, the finer is rendered so weak as to become useless. Whether by a more careful annealing this may be prevented remains to be ascertained. Though it is not necessary, the least touch of oil at the part where the knot is to be drawn will facilitate the running of the wire, and also, it is desirable, that a tolerably long piece should be used, so that it may be passed over the fingers; otherwise a steady, firm pull is not so easily obtained, for the wire is so smooth that it is apt to slip over them as the knot is drawn. For sutures about the eyelids, where the skin is thin, or about the face or head, where it is of importance to avoid all irritation, or on the face, where marks are objectionable, the fine wire will be useful, for it is so small as to leave hardly a trace of its trajet.

As the wire has not yet been drawn for sale, Mr. Nunneley will be happy to supply any gentleman who may wish to try it with sufficient for the purpose, on a directed envelope to enclose it being sent to him.

ART. 124.—*Oakum as a Substitute for Lint in Gun-shot and other Suppurating Wounds.*

By Dr. LEWIS A. SAYRE, Surgeon to the Bellevue Hospital,
New York.

(*American Medical Times*, and *Dublin Medical Press*, August 27, 1862.)

Dr. Sayre has for many years past been in the habit of using picked oakum in all cases of suppurating wounds, particularly in

connexion with opened joints, where the suppuration is excessive. The great number of gun-shot wounds now in Bellevue Hospital, where he uses it entirely to the exclusion of lint, has furnished an opportunity for a number of army surgeons to examine its advantages, and they have requested him to make the subject more generally known to the profession. One of the objects of lint applied to a suppurating wound is to absorb the discharge; now as most of the lint is composed either entirely or in great part of cotton, it acts more like a tampon, or a retainer of the secretions, than as an absorber. If you will take a bale of cotton and immerse it in the river for one month, or even longer, and then remove it, you will find on opening it that the cotton in the centre of the bale is perfectly dry, thus proving that it cannot be soaked through any great thickness, or that it will not absorb moisture. So, when placed over a suppurating wound and left for some hours, it will be found perfectly dry except at the point of contact: acting, in fact, like a bung in a barrel, or a cork in a bottle—to *prevent* the escape of the pus—which necessarily burrows in different directions, thus forming extensive abscesses, and adding greatly to the danger of the patient; and when removed, the pus will gush out in large quantities. Now, if you place picked oakum over these said wounds, you will find after the same number of hours that the oakum is perfectly saturated with pus, and the wound itself almost perfectly dry and clean—the oakum acting like a syphon, and discharging the contents of the abscess by capillary attraction.

It is necessary to place under the wound a piece of india-rubber cloth, or oiled muslin, for the sake of cleanliness; and in case of much inflammation, by simply wetting the oakum in cold water, and wrapping the oiled muslin around the limb, or wounded part, so as to exclude the air, you have at once the neatest and most comfortable poultice that can be applied to it. In gunshot wounds, which go through and through a limb, particularly if made with the "Minié ball," the whirl or screw of the ball entangles in its thread the muscular fibres and cellular tissue, and separates them from their attachments for a long distance from the real track of the ball itself. As the muscle and tegumentary tissues are more freely supplied with bloodvessels than the fat and cellular tissue, the consequence is that they begin to granulate much more readily than those other tissues, and will thus often close up the wound, and prevent the free escape of pus, before those parts have perfectly healed, and thus lead to the formation of extensive secondary abscesses. Dr. Sayre, therefore, in all cases where no bloodvessels prevent it, passes an eyed probe through the wound and draws through it a few fibres of the oakum or tarred rope, which keeps it perfectly free, and the tar is a very excellent antiseptic, and removes all unpleasant odour.

A few fresh fibres are twisted on the end of the seton at every dressing and drawn into the wound, and the soiled piece cut off and removed with the dressings. Another great advantage which the oakum possesses over lint, which in these times of heavy taxation is not to be overlooked, is its cheapness. Lint at the present time costs from \$1.25 to \$1.35 per pound, whereas the finest picked

oakum can be obtained for ten cents per pound. And if it were universally adopted in the army it would save many thousands of dollars to the government, and I confidently believe the life of many a soldier. And no surgeon who has once used it will ever resort to lint again—particularly if the lint is made of cotton.

ART. 125.—*On Union by First Intention after Amputation.*

By M. VELPEAU.

(*Gazette des Hôpitaux*, No. 90, 1861.)

M. Velpeau considers the hopes which are entertained by surgeons of obtaining union by first intention after amputations to be illusory. As a rule, only the skin unites by first intention; beneath this the deep parts remain still ununited, and there must necessarily be suppuration of these, and union by granulating surfaces. The variety of the parts divided by circular or by flap incisions might lead us to expect this result; moreover, the bones, crushed by the saw, are by no means in a favourable state for the process of union by first intention. Experience teaches that in many amputations a piece of bone splintered by the saw is afterwards lost by exfoliation or necrosis; and the muscular tissues stretched over the sawed surface of the bone can naturally take on no primary union with a tissue which is affected with suppuration, or with osteo-myelitis. Often, beneath the apparently united flaps, inflammation extends through the highly vascular marrow-substance of the bone, and commencing necrosis maintains a fistula at some point of the cicatrix, or a confined necrosis leads to the formation of an abscess. In favourable cases the skin unites, and also the muscular parts, but between the bone and the muscles there remain angular cavities which cannot close by first intention: so also with the tracks of the ligatures, which act as foreign bodies. It is a false assumption that by immediate union the parts are brought into the condition of sub-cutaneous wounds, for in the latter the parts divided remain in contact. The chief requirement for the immediate union of amputation wounds lies not in the exclusion of air, but in a regular apposition of similarly constituted tissues, a point which cannot be obtained in the amputation of limbs. Velpeau does not, however, reject union by first intention absolutely; but he believes that, although it gives a kind of security to the patient, at the same time it demands redoubled watchfulness on the part of the surgeon. Exfoliation, and the loosening of a siguistrum, are made the more difficult in proportion as the superficial primary union is complete. After amputation of the breast primary union often fails; and in some cases erysipelas of a most dangerous kind follows.

(G) CONCERNING ANÆSTHETICS.

ART. 126.—*On Carbonic Acid as an Anæsthetic.*

By M. OZANAM.

*(Journal of Practical Medicine and Surgery, and Medical Circular,
August 27, 1862.)*

M. Ozanam brings a case before the French Academy of Sciences in order to demonstrate the efficacy and innocuity of carbonic acid as an anæsthetic.

CASE.—“I had recently,” said he, “to open a deep-seated abscess in the thigh; the patient was a young man, and in order to induce insensibility to pain, I used a mixture of three parts of carbonic acid with one of atmospheric air, included in an india-rubber bag, of a capacity of about twenty-four quarts.

“The bag was supplied with a long flexible tube, terminating in a mouthpiece, which was held at a sufficient distance from the face to admit of a certain proportion of air being simultaneously inhaled.

“Anæsthesia followed in the course of about two minutes, and was attended with two notable phenomena—viz., the acceleration of the breathing, and copious perspiration on the face. The operation was painless, with the exception of the last incision, which was indistinctly felt, and the patient immediately returned to consciousness.”

ART. 127.—*On Local Anæsthesia from Cold, and its Applicability to the Severest Operations.*

By Dr. JAMES ARNOTT.

(Lancet, June 28, 1862.)

The principal objection which was at first made to the production of anæsthesia by cold, that it was troublesome and tedious, it is now hardly worth while to notice. The trouble occasioned by mixing a little pulverized ice and salt, and applying the mixture by means of a bit of gauze for a minute or two to the skin (which is the ordinary mode of effecting congelation), has been found to be very little, and much less than what is required for the proper administration of chloroform. No previous minute examination of the heart and lungs is necessary for local anæsthesia; no assistant to watch the respiration and pulse as well as to restrain the convulsive movements of the patient; no preparation of breathing and galvanic apparatus: for all of these, as we learn from the proceedings at coroners' inquests, are now expected by the public, and they all should be attended to and provided in order to lessen as much as possible the risk incurred.

Another objection to congelation was, that the reaction from it might interfere with the healing of the wound. But there is no reaction, in the proper sense of the term; instead of an increase there is a decrease of action as a result of congelation, and the antiphlogistic virtue proceeding from this effect is most valuable in preventing that excess of inflammation which so often prevents union by the first intention. This was strikingly shown by the different

results of two operations performed on varicose veins in the Birmingham Hospital, one of which was done under anæsthesia from cold; and a list of nearly a hundred operations under congelation has been published by a London surgeon, in all but two of which the wound, when it was desired, healed by the first intention. Nor, so far as Dr. Arnott knows, has erysipelas ever succeeded an operation performed under this anæsthetic. It might, however, be otherwise if the congelation were by any means made to extend to the deeper tissues in the severer operations; for he has observed that when, in some of its remedial uses, it has been made to penetrate deeply, a very perceptible swelling has been the consequence, which might be adverse to union by the first intention, and, at all events, it would be necessary to bear this circumstance in mind when dressing the wound.

Sir Charles Bell, in his *Bridgwater Treatise on the Hand*, has said that the skin is exquisitely sensitive in order that it may serve as a protector or monitor to the parts underneath, which in their normal condition are comparatively insensible: and that it is only when the skin is cut by the surgeon that acute pain is felt. If this statement be correct (and the opinion is not confined to Sir C. Bell), it would follow that any means capable of completely suspending the sensibility of the skin would deprive the deeper operations of their terrors. This cutaneous anæsthesia can certainly and on all occasions be effected by congelation, which, in its ordinary degree, not only thoroughly benumbs the skin, but the subcutaneous tissue also. And as the healing of the operation-wound is as certainly promoted by such moderate applications of this agent, it is cruel to withhold it in those amputations which are performed without chloroform in consequence of the patient's extreme weakness or visceral disease rendering the danger from its use greater than usual.

It is undoubtedly a great defect of congelation, that its influence, in the ordinary mode of applying it, should extend to so small a depth. Whether the danger from chloroform ought not to be reckoned a much greater defect, in comparing the two agents, is a point on which opinions will probably continue to be divided. Those, however, who insist upon the necessity of perfect anæsthesia in operations, or at least of perfect forgetfulness by the patient of his having endured pain, may conjoin with congelation such a comparatively safe dose of chloroform as will be sufficient to render the deeper-seated tissues insensible.

Having elsewhere described minutely the various methods of producing anæsthesia by cold, whether by the application of solids, liquids, or gases, already cooled to the requisite degree, or of bodies in a state of rapid transition from the solid to the fluid or aerial form, the author at present limits himself to a very few remarks on this part of the subject. If sufficient pressure were combined with congelation, he had no doubt its influence would penetrate deeply enough to render amputation of the limbs perfectly painless. And this simultaneous pressure and congelation could easily be effected by enclosing a portion of the limb in a cylindrical case of gutta percha with membranous endings for tying, containing a

powerful semi-fluid frigorific mixture, and having rising from it a vertical tube, in order to obtain conveniently the requisite hydraulic pressure. A flat, thin, metallic bottle, filled with such a mixture, or a solid piece of brass of the same shape already cooled to below zero of Fahr., would, by being passed slowly round the limb, constitute a convenient means of congealing the skin in amputation; and it is not improbable that the principle of the new mode of making ice by the sudden evaporation of ammonia may be found applicable to the construction of a simple apparatus for remedial congelation. If a dentist were willing to incur the necessary expense of time and money, he could, in the extraction of carious teeth, or in preparing the mouth for a set of artificial teeth, benumb the alveolar process very perfectly by covering the gums with a thin metallic case made to fit with the greatest accuracy by electrotype or otherwise, through which a current of freezing brine could be passed. A current brings fresh particles of the cold body in quick succession, and the same advantage is obtained when a thin metallic vessel, containing a powerful freezing mixture, is both pressed and moved upon the part.

ART. 128.—*A New Cause of Death under Chloroform.*

By Dr. G. W. BALFOUR.

(*Edinburgh Medical Journal*, August, 1862.)

CASE.—This case occurred during the Burmese war in 1853; and was related in a letter from John Balfour, Esq., D.I.G., then field-surgeon to the army in Burmah. A soldier received a gunshot wound through the upper part of the thigh, and secondary hæmorrhage repeatedly recurred. It was supposed that the profunda or one of its branches was injured, and it was determined to tie the femoral artery above and below the origin of the profunda;—this was done while the man was under chloroform. In the course of the operation the man, who had had his dinner previously, became sick and vomited. He subsequently sank and shortly died from exhaustion, as was supposed. On examination of the body, the profunda was found cut across by the ball, and a false aneurism formed at the seat of injury, and the trachea was found filled with vomited matters. Dr. Balfour remarks that, though an extreme case, this was but a sample of one very common source of danger in the use of chloroform, arising from its anæsthetic properties interfering with the natural actions of the nervous system.

ART. 129.—*Recent Deaths under Chloroform.*

By Mr. —.

(*Lancet*, June 7, 1862.)

The following excellent remarks are by the writer of "Medical Annotations" in the *Lancet* :—

"The terrible frequency of deaths consequent upon the administration of chloroform for surgical purposes is a matter which cannot be regarded with indifference. Two deaths are now to be recorded, both under somewhat noteworthy circumstances. John Emanuel

Hill, of Norwich, aged sixteen years, was one of these unhappy persons. From the evidence given at the inquest, and the remarks of the coroner, we gather that the lad was the subject of disease of the bone of the great toe, the result of injury. He was placed under chloroform by Mr. Willis, not a qualified medical man, in the presence of Dr. E. C. Holland and Mr. Crawford Bell, both qualified practitioners, but said to entertain homœopathic views. Dr. Holland stated that the patient was a very healthy young man: that from a careful prior examination he was satisfied there was no disease which would render the inhalation of chloroform dangerous: that a very small quantity of chloroform was administered: and that the patient died in five minutes from the commencement of the inhalation. We pass over the statement of Dr. Holland, that from the first he considered that *nothing would save life* but amputation of the toe; and we only call attention here to three facts: the quantity of chloroform does not seem to have been measured; it was administered by an unqualified person, without using any apparatus for determining the proportion of chloroform in the inspired air; it was employed for a minor operation. The second case is that of Pierre Pelletier, aged thirty-three, the subject of fistula. His physician had examined the head and heart prior to causing chloroform to be administered, and found nothing to create doubt. However, the patient died under chloroform. Mr. Gant, of the Royal Free Hospital, found the heart and lungs extensively diseased; the disease of the heart is described as 'atrophy.' Mr. Gant commented, apparently with some severity, on the mode of administration, and the laxity of the prior examination of the deceased. The physician, however, appeared to have taken most of the usual precautions, and he was properly acquitted of all criminal implication in the death of the patient. But here, too, it is proper to point out that the chloroform does not appear to have been given in measured quantity, that no apparatus was employed for regulating the admixture of air, and that the operation was one of a minor character. These conditions have now been found concurrent in so very large a proportion of fatal cases, that we cannot but continue to attach to them the importance which we have always maintained to belong to them.

"Some dozens of lives have now been sacrificed by the administration of chloroform for the extraction of teeth, the removal of superficial sebaceous tumours, amputation of toes and fingers, and other trifling operations. Although Dr. Holland went to the extreme point of saying that he considered from the first that nothing could save his patient's life but amputation of the toe, yet it may be properly assumed that the affections mentioned do not involve issues of life and death. Moreover, we would point out that the facilities for procuring local anæsthesia are too much neglected in these cases. The removal of superficial tumours, the evulsion of nails, and the incision of abscesses may be performed with the most complete absence of pain if the part be previously refrigerated by the well-known mixture of ice and salt. The most painful of minor operations is the evulsion of the great toe-nail. Mr. Ernest Hart recently stated at the Medical Society of London that he had more than

once performed this operation with the aid of the freezing process, the patient being completely unconscious of pain. It is sometimes complained that this process is tedious in its application; but to ensure rapidity, it is only necessary that the ice should be very finely powdered, or, what is better, flaked with the end of a knife or cucumber-slice. It has lately been stated that the local application of chloroform in a particular manner, which we recently described, causes anæsthesia of the part; the application of compresses steeped in solutions of aconite has produced the same effect. The more general application of local anæsthesia is a means of diminishing that considerable mortality from the use of chloroform which must justly increase the growing fear with which the profession and the public regard that useful and beneficent agent. There are some features in many of the cases ending fatally which seem to show that a false security has been engendered as to the use of this agent. Dentists, druggists, and practitioners of but limited experience are found administering chloroform under very trivial inducements, and omitting those precautions with which some of the most experienced and accustomed chloroformists would not venture to dispense. No prior examination, or a very imperfect one, is made; the chloroform is not measured; no apparatus is used; the admission of air is regulated by a rule of thumb; the pulse and respiration are not systematically watched and noted; and death occurs. It is highly desirable that a stricter *régime* should prevail, and that the administration of chloroform should not be thought or spoken of, or practised, as a light matter. We protest against its employment where local anæsthesia may be substituted, where unskilled persons are the agents, where proper examinations and watchful supervision are not instituted, where provision is not made for its careful measurement and the regulated admission of 95 per cent. of atmospheric air, and where means of resuscitation are not apparently provided. The frequent recurrence of deaths by chloroform is a veritable misfortune to humanity and to science; it is one against which we are bound to employ all the care and forethought which are applicable to its prevention."

SECT. II.—SPECIAL QUESTIONS IN SURGERY.

(A) CONCERNING THE HEAD AND NECK.

ART. 130.—*On Glaucomatous Affections, and their Treatment by Iridectomy.*

By Mr. BOWMAN, Surgeon to the Royal Ophthalmic Hospital, Moorfields, &c.

(*British Medical Journal*, Oct. 18, 1862.)

After highly eulogizing Helmholtz, Mr. Bowman proceeds to speak of glaucoma. He says:—

"Whatever the essential nature of the glaucomatous state, we as practitioners are chiefly concerned with the *augmented tension of the eyeball* which attends it. This we have to distinguish at the

earliest stage, and towards the mitigation of this our treatment is to be directed. As a practitioner having to relieve disease, I call *all undue tension of the eye glaucomatous tension*. The object of treatment is to reduce this within natural limits; for, if it continue, the result is inevitable, however delayed.

"A person unused to close and accurate examination of the physical condition of the eyeball, even though he be seeing eye-diseases frequently, may readily fall into error on this important matter of *the state of the globe as regards tension*. He may suppose that the increased tension may depend simply on the degree of fulness of vessels, or on the amount of effused fluids within the eye. No mistake could be greater. It cannot be too strongly impressed on all who may have to discriminate between glaucomatous and other diseases, that the depth of redness of the eye, or the presence of more or less of effused blood, or serum, or lymph, or pus within it, has no connexion whatever with the question of tension, since all or any of these may be present in a high degree without any glaucomatous disease, any increase of tension, and therefore without the indication such tension gives for its relief by iridectomy.

"In various congestive or inflammatory states, whether of cornea, sclerotics, choroid, iris, or retina, or of some or all of these, the disease may be of more or less intensity, may run its course more or less rapidly, and may do permanent damage to the structures involved, without our detecting any augmented tension of the coats at any period. Intraocular hæmorrhages, as a rule, even when considerable, are not attended by a higher tension; often, indeed, by a diminished size of the globe-contents, and an unnatural softness of the eye. Subretinal effusions of blood or serum are, in the great majority of cases, unmarked by any increase of tension.

"On the other hand, exalted (or glaucomatous) tension may occur, intermittently or persistently, in eyes which afford no indication whatever of inflammation, where there has never been any pain or vascular excitement, and where there is still an absence of inflammatory effusions. Such augmented tension, though slight in degree, may effect by long continuance, and without any intercurrent inflammatory complication, what a pressure more intense will effect in a much shorter time, especially if, as then usually occurs, it becomes complicated with subacute or acute inflammatory action.

"I must add, however, to avoid the risk of misconception, that various affections of the eyes, not glaucomatous in their origin, may present in their course glaucomatous complications—*i.e.*, become combined with an augmented tension of the eye, and with the secondary results of pressure; and hence that it is of the highest importance, in practice, to distinguish accurately whether, and when, such complication has arisen, since, under several contingencies, it may need the application of iridectomy.

"Thus the idea of inflammation must be dissociated from that of glaucoma and glaucomatous tension. Though often combined, and the combination then of the greatest importance, yet their co-existence is not essential to the presence of either; and, as a matter of fact, they occur independently of each other every day."

Mr. Bowman then proceeds to explain his method of ascertaining the degree of tension, observing:—

“It is easy enough to estimate the tension of an eye, though there is a right and a wrong way of doing even so simple a thing. I may, therefore, explain, that *both forefingers* should be used together through the upper lid, which is to be gently closed. One finger steadies the eye by pressing against it with a suitable degree of force, while the other estimates the tension; or rather both together estimate it, when thus used in concert. I tell the patient to *close the eyes gently as if asleep*; and the fingers are then applied to the upper part of the globe, behind the corneal region. If the patient *forcibly* compress the lids, the mere action of his muscles may cause a momentary tension of the eyeball as well as interrupt the examination. If the eyeballs are deep-set or small, the determination of the tension is less easy. With medical men, the touch is already an educated sense, and a very little practice will suffice to apply it successfully to the eye.”

An operation should be resorted to, Mr. Bowman appears to think, in all cases of glaucoma, even in the very advanced cases. He says:—

“During the last five years I have had the responsibility of advising in very many such cases. In the more advanced stages, I have not felt able to urge the operation strongly; and yet I have recommended it as the only means of saving the little sight remaining. Where there is more sight left to be preserved, the operation is more to be insisted on; but, unfortunately, the patients, not being so blind, are often less disposed to submit to it. The progress of structural changes in the eye, marked by narrowing of the visual field, should induce us to urge iridectomy; and the earlier we perform it, the better chance there will be of deriving improvement; for we cannot recall the activity of the nerve-fibres that have undergone complete atrophy.”

In the sub-acute and the acute forms, iridectomy is all the more urgent. In acute cases particularly, “*iridectomy should be performed without the slightest hesitation or the smallest delay.*” The following depreciatory observations are made on Hancock’s operation:

“It may be expected of me, however, not to pass over altogether in silence Mr. Hancock’s operation, called by him division of the ciliary muscle; and applied by him, as he informs us, ‘with most success in keratitis, sloughing of the cornea, staphyloma, dense opacity of the cornea (in some cases of several years’ duration), and in conical cornea; also in certain forms of amaurosis, in acute and chronic glaucoma, and in posterior staphyloma and myopia’—a list comprising diseases so widely different from one another as to suggest a doubt whether a common principle can govern their treatment by the same surgical proceeding.

“The incision through the coats of the eye, thus styled division of the ciliary muscle, involves, I believe, the sclerotic coat, a very small portion of the whole ciliary muscle, the ciliary body of the

choroid, with the vitreous humour. In many instances it appears to have evacuated the aqueous humour, while the vitreous humour must always either escape at the moment, or have liberty to drain away for some time afterwards. If it be of the essence of the operation to divide the inner or circular fibres of the ciliary muscle (Heinrich Müller's), then a consideration of the anatomy of the parts would show, I think, that the aqueous chambers are likely to be opened. If the humours of the eye escape, tension is, of course, relieved, and if much vitreous humour be lost, it is conceivable that even permanent reduction of tension may result. Experience only can determine whether such an operation may suit certain forms of disease; the proceeding may possibly have advantages in certain cases, although the hypothesis on which it is grounded prove untenable. Meanwhile, it seems desirable that the cases in which it is said to have effected so much, and on the strength of which the profession is urged to adopt it, should be published in greater detail, and with that regard to scientific accuracy which recent advances in knowledge demand. Particularly is this to be wished for, when we are asked to abandon, in favour of this incision in glaucoma, the operation of iridectomy, the admirable results of which have now been tested by a wide experience, and guaranteed by many men fully capable of arriving at a sound conclusion."

With respect to the operation itself, Mr. Bowman supplies a good deal of practical information in a "note."

"The operation is best done when the patient lies on a sofa on his back, with the surgeon standing at his head. I prefer to use chloroform, though I have often operated without it. It should be given so as to render the patient completely passive; for the great delicacy of the operation requires perfect quietude of the eye, lest the steps should not be severally completed in the most perfect way. My own opinion undoubtedly is there is hardly any person to whom chloroform may not be safely administered; though, it is true, some subjects demand more care in its exhibition than others. The sickness may usually be avoided by taking care that no food be in the stomach at the time; and if it occur during the operation, the steps must be simply delayed while it lasts, not varied in any way. If the sickness is very straining, so as to distend the vessels of the head and face, I usually close the eye, and gently compress it by the fingers on the lid, during the efforts at vomiting. I have not seen any harm happen from such vomiting, when the incision has been properly made—not too extensive, and not too far back from the corneal margin.

"I always keep open the lids by the wire speculum, which an assistant holds a little forwards if it tends to exert pressure on the globe. It is well for the surgeon to be able to use the right or left hand indifferently in making the incision, as he can then select the most convenient spot. I have always preferred to make the iridectomy nearly or quite upwards; because I believe this direction to be as good as a lateral one in reference to the visual field, and for appearance sake. It is, however, rather more easy on the whole to make the iridectomy to one side than upwards.

"I make the incision in one of the two methods, according to the size of the anterior chamber. When there is space enough, it is best to use the triangular lancet-shaped blade, inclined at an angle on the flat, and which I believe is used generally abroad, as well as by Von Graefe. Having selected a place for the incision, I seize the conjunctiva with proper forceps immediately opposite, and thus fix the globe without making any pressure upon it, or pulling it from its bed. The lancet is then thrust in so as to enter the anterior chamber at its rim immediately in front of the attached border of the iris, and is carefully advanced towards the opposite side so as to form an opening of the required size; and if the opening cannot thus be made as large as is desired, it is enlarged at one angle on withdrawing the blade. When, however, the chamber is shallow, I prefer what I at first always used: namely, a narrow extraction knife, running its point along the rim of the chamber for the requisite extent, and making the counter-puncture much as in ordinary extraction. Thus the instrument avoids the pupillary region and the lens. The operation is more difficult where the chamber is shallow. Whichever instrument be employed, it enters a little behind the apparent junction of the sclerotica and cornea, in the sclerotica, and in entering the rim of the anterior chamber, it usually passes across that junction and through a very little of the corneal tissue just in front of the pillars of the iris.

"As the instrument used in making the incision is withdrawn, the aqueous humour escapes; and it is well to let it do so gradually, and to keep the point of the instrument towards the cornea rather than towards the lens. The iris may now be found either to remain in the chamber or to prolapse. If the former, the small slightly curved iris forceps are to be introduced (closed) into the chamber, and made to seize the iris opposite the middle of the incision, about midway between its pupillary and outer border. The iris is then brought outside the chamber and divided with small scissors, on one side of the forceps, from the pupillary to the ciliary border, the forceps pulling it gently at the same time, so as to ensure this complete division of it. The end held by the forceps is then torn from the ciliary attachment as far as the angle of the incision, and even dragged upon a little, so as to detach it beyond the angle, and then divided with the scissors quite close to the angle. The cut end then retreats within the chamber. The opposite side of the prolapsed part is then seized and dealt with exactly in the same manner. No iris should be left in the angle of the incision, lest the healing process be imperfect, and subsequent irritation occur.

"If the iris at once prolapse on the completion of the incision (it is often bulged by aqueous humour of the posterior chamber), the forceps need not be introduced within the incision, but may seize it outside. The less any instrument enters the anterior chamber the better, for fear of damage to the lens.

"If any blood flow into the anterior chamber during the operation, it is as well to allow it to escape before it coagulates. This is best done by inserting a fine scoop within the lips of the incision (not into the chamber), and at the same time by making, if

requisite, slight pressure on the eye by the forceps which holds it. The cornea should not be pressed on, lest the lens receive injury; and, rather than run the slightest risk, the blood may be allowed to remain, as it is very soon dissolved by the aqueous humour, and flows out or is absorbed.

"The operation just described ensures the excision of a complete segment of the iris, from pupillary to ciliary margin, of a width determined by the size of the incision, and which may be usually about a sixth or a seventh of the whole circle.

"After the operation, little is usually required beyond seclusion of the eye from light while it remains sensitive, keeping it cool by a wet rag as long as may be agreeable to the patient, together with ordinary attention to the general functions.

"In all but a few cases, the globe-tension remains permanently lessened afterwards. In some, it returns more or less during a few days, but again subsides as the wound fully heals. In some, where it has long existed, or been extreme, it is not entirely relieved, but only much lessened; and here an additional iridectomy may or may not be required, according to the indications afforded by the state of vision. If this seems to be recovering, no further interference will be necessary; and, indeed, if the iridectomy have been properly performed in the first instance, it will very rarely have to be repeated. In at least three instances, I have known such a supplementary operation completely efficacious in reducing tension to the natural standard, when, from one cause or another, the effect of the original iridectomy had proved insufficient."

ART. 131.—*On Sympathetic Inflammation of the Eyeball.*

By Mr. HAYNES WALTON, Surgeon to the Central London Ophthalmic Hospital, &c.

(*British Medical Journal*, July 19, 1862.)

In some clinical remarks at the Central London Ophthalmic Hospital, Mr. Walton speaks of this affection, and the means of arresting it. He says:—"Sympathetic inflammation, or sympathetic ophthalmitis, may arise out of any circumstances that produce disorganisation of the eyeball. It is most commonly, however, seen when an eye has been spoiled by wounds. This is the usual course of things. An eye is wounded, perhaps severely, and the lens has escaped, or a portion of the vitreous humour; or, perhaps, the cornea only has been penetrated, and the iris, or the lens wounded. The acute and primary inflammatory attack is subdued, and chronic disease supervenes. The heretofore sound eye gets intolerant to light, the first common result; impaired vision in some form is the next bad omen. Loss of focal adjustment, incapability of sustaining vision on minute objects, loss of definition (generally called feeble sight), muscæ, spectra, flashes, stars, inflammatory action, loss of pupillary movements, change of iris colour, softening of the eyeball, and shrinking, are the later manifestations. Thus it would seem that the morbid

action travels from the retina forwards. Ultimately, all the ocular tissues are involved, and atrophy ensues. There may be varieties in the subjective and objective symptoms; and there may be no pain, or it may exist with great severity.

"The sympathetic action is imminent, so long as any irritation produced by the traumatic disease lingers, so that it may be developed in a few weeks, or not for years. It cannot be said that any peculiar form of wound, or the injury of any particular tissue, excites that kind of action which develops the sympathy; as blows without breach of surface, or chemical injuries, may cause it.

"Inflammatory affections producing disorganization of the eye may induce sympathetic disease. I have seen the greater number of cases arising from staphyloma of the cornea and the sclerotica—that is, general enlargement of the eyeball—the result of purulent ophthalmia in infancy, than any other cause.

"The diagnosis is by no means obscure, and in traumatic cases it is most easy. The eye primarily injured or diseased, always manifests symptoms of irritation or disturbance; and there is evidence of acute or chronic inflammation. These may be slight, but they are to be discerned with care. There is always soreness under touch. So far as I know, vision is invariably extinct. If, then, a patient who had lost an eye from accident or disease were to apply to me on account of the eye heretofore well, but now attacked with any of the symptoms that I have pointed out of sympathetic derangement, I should examine the eye primarily injured; and if I discovered any morbid action in progress, any of those states which are connected with, or arise out of, what is called inflammation, I should say that I had before me a case of sympathetic ophthalmitis.

"There are two errors into which you may fall, but they are easily avoided when you are on your guard. Do not, then, mistake for sympathy what is merely the same disease that has appeared in the one eye, and is secondary only in the order of time. Remember that the destruction of one eye, from any cause, may be followed, although the occurrence is not common, by the loss of the power of the retina in the other, and this without the least trace of any active symptom in that which was hurt. Precisely the same thing may occur after the one eyeball has collapsed, or has even been extirpated, so that sympathetic inflammation can have nothing to do with it.

"The treatment is definite and sure: but is not to be found in general remedies, local applications, nor any dietary system. Nothing of the kind can be depended on; the affection can be stopped, or subdued, only by surgical treatment. A portion of the originally diseased eyeball must be removed, whereby the products that have set up the irritation, or the cretaceous or ossified tissue which has acted as a foreign body, may be got rid of; or extirpation resorted to. The practice works wonders when done early. If adopted before the sympathetic action has induced palpable structural changes, it will be all effectual. At later stages it may arrest progress, and stay the destruction. Even when the pupil has

become adherent to the capsule of the lens, and the iris dull, I have known a check.

"As a rule, the removal of a portion of the eyeball, 'abscission,' is adapted to those cases in which the eye has been wounded in the front part, and the abnormal changes limited to that portion of the organ. When the whole eyeball evidently is diseased, and especially when there is distension of the sclerotic coat, or general enlargement, 'extirpation' is the more adapted.

"I perform abscission in this manner. The eyelids having been retracted, I transfix the cornea, or whatever remains of it, or the staphyloma if there be one, with an ordinary tenaculum, and cut it off with a long and narrow scalpel, gently and quickly. It may be necessary to make the amputation a little behind the cornea, and then the iris, or whatever remains of it, is taken away. When the lens is present, whether opaque or not, it ought to be removed. An attempt should be made by gently manipulating and rapid closing of the eyelids, to save as much as possible of the vitreous humour. I now place a ball of cotton wool or a pledget of lint quickly over the eyelids, maintain it with a bandage, and keep the eye so bound for two or three days. Afterwards, I apply strips of plaster. There is no more important part in the proceeding than this, without which being properly done there may be troublesome bleeding and long convalescence. Healing is effected by the cicatrising of the surface, and its rapidity depends on the healthiness of the vitreous humour. Among the advantages of 'abscission,' may be mentioned that it admits of the most perfect adaptation of an artificial eye. This is through the stump that is left.

"'Extirpation' should be done within the 'ocular sheath' of the eyeball. For much that is interesting with regard to this sheath or tissue, of which the existence was only made out a few years ago by Dr. O'Ferrall of Dublin, I beg to refer you to my work on the 'Surgical Diseases of the Eye,' second edition. This operation would be called a more brilliant one than 'abscission;' and there can be no doubt that, although the proceeding, so far as the practical surgery is concerned, is more prolonged and severe, the recovery may be more rapid, and the general effect on the system perhaps less. Yet I am quite sure that if the patient's ultimate welfare be considered, its adoption should be the rare exception.

"I consider this to be the best manner of doing the extirpation. The eyelids having been separated by the silver wire retractor, the conjunctiva is dissected off with forceps and scissors close to its ocular attachment; the recti and oblique muscles then taken up severally with the hook, as in the operation for strabismus, and divided at their insertions; the sheath detached by a probe or hook from the eyeball, which should now be drawn aside, and the optic nerve cut through. There is generally no bleeding; but should it occur, a compress and bandage must be employed."

ART. 132.—*Amaurosis consequent on Acute "Abscess" of the Antrum.*

By Mr. S. J. A. SALTER.

(*Proc. of the Royal Medico-Chirurgical Society*, June 24, 1862.)

CASE.—This case was one of unusual severity, and of exceptional complications. The patient, a young woman, 24 years of age, was attacked with violent toothache in the right upper first molar, which was followed by enormous swelling of the side of the face, and intense pain. The eyeball then became protruded, and she soon after perceived that the eye was blind. Shortly after the establishment of these symptoms, "abscess" of the antrum pointed at the inner, and then at the outer canthus, and a large discharge of pus at both orifices followed; these orifices soon closed, and the general symptoms of the part continued unchanged—the swelling of the face, protrusion of the globe, and blindness. This state of things lasted for about three weeks, when the patient was sent to Guy's Hospital, and admitted. At this time the patient exhibited hideous disfigurement from swelling of the face, œdema of the lids, and lividity of the surrounding integument. Upon examining the mouth, it was found that the carious remains of the first upper right molar appeared to be associated with, and to have caused the disease. Together with the outer contiguous carious teeth this was removed, and led by an absorbed opening into the floor of the antrum. The hæmorrhage which followed the operation was discharged partly through the nose and partly through the orifices in the cheek, as well as from the tooth-socket, showing a common association of these openings with the antrum. The condition of the eye constituted the most important symptom, and the most distressing. The sight was utterly gone; the globe prominent and everted. There was a general deep-seated inflammation of the fibrous textures of the eye. The pupil was large and rigidly flexed; it did not move co-ordinately with the other under any circumstances. Some abatement of the symptoms followed the extraction of the tooth; but it was soon found that there was a considerable sequestration of dead bone, which was removed. The necrosis involved the front part of the floor of the orbit, the upper cheek portion of the superior maxilla, with the infra-orbital foramen, and a large plate of bone from the inner (nasal) wall of the antrum. The removal of the dead bone was followed by the immediate and complete cessation of all inflammatory symptoms; but the eye remained sightless, and the pupil rigidly fixed. About five weeks after the removal of the dead bone, it was noticed that the pupil of the affected eye moved with that of the other, under the influence of light, though vision in it had not returned. The eye was frequently examined at this stage with the ophthalmoscope. All the structures, including the retina, appeared healthy, except the termination of the optic nerve, which was perfectly white and anæmic, while that of the other eye was pink and natural.

Mr. Salter also refers to two other cases essentially similar to his own. The first (unpublished) occurred in the practice of Mr. Pollock, of St. George's Hospital. The patient had intense inflammation of the entire maxillary region on one side, caused by a carious tooth. It implicated the whole face and the contents of the orbit, but was not attended by "abscess" of the antrum or necrosis of bone. The inflammation completely ceased on the removal of the tooth, but the sight was permanently lost; the pupil was at first fixed, but afterwards moved with that of the other eye. Another

example, closely resembling these, was published by Dr. Brück, in Casper's *Wochenschrift* for 1851. It was, however, more chronic, and the loss of vision was only temporary. The author concludes his paper by suggesting that the serious ophthalmic symptoms depended on the nerves of the eye being involved in a plastic inflammation in their course, external to the skull and before their distribution; that the optic nerve was permanently damaged, as shown by the permanent blindness; that the third nerve was temporarily implicated, as shown by the temporary fixedness of the pupil; and the eversion of the eye from the first seemed to indicate that the sixth nerve was less or not at all involved. Finally, the author leaves it an open question whether the anæmia of the optic nerve, as displayed by the ophthalmoscope, is to be looked upon as a cause or consequence of its suspended function.

ART. 133.—*Cases of Reflex (?) Amaurosis with Coloured Vision.*

By Dr. J. H. JACKSON, Clinical Assistant at the Royal London Ophthalmic Hospital, &c.

(*Royal London Ophthalmic Hospital Report*, Oct. 1861.)

The first of the following cases is interesting not only pathologically, but also in relation to a medico-legal question recently raised in a court of law; and it is the more valuable that, not having occurred after any injury, there was no room for suspicion of unfairness in the description of the symptom by the patient—a symptom which, even after the use of the ophthalmoscope, must remain subjective. The medico-legal question referred to was raised in a recent action brought by a corn-dealer against a railway company, to recover damages for defective vision following on injuries received in a railway accident. The defect was stated to be coloured vision (yellow), so that the plaintiff was unable to distinguish yellow and white wheat—both looked yellow. In this case there was no subjective symptom, either to the eye, unassisted, or aided by the ophthalmoscope.

CASE I.—A man, aged 39, admitted as an out-patient under Mr. Poland, came under my care on June 1st, for impaired sight, which had commenced gradually three months before. He could not read the largest print, and was led to the hospital. He had no pain, and had had none from the first. He had been temperate, and, except for the defect of sight and a few nervous symptoms, to be presently alluded to, was quite well. His eyes were examined by the ophthalmoscope by several observers, and both the optic discs were found to be anæmic. There was no trace of choroidal or iritic inflammation. The interesting point in this case, however, was, that the patient saw everything as if yellow; it mattered not what colour they might really be—they were all yellow. Again, this pathological condition was rendered interesting by the fact of his business being interfered with from the first, not merely by loss of the power of seeing, but by the objects being seen coloured. Thus he might have pursued his business, of buying wood, in spite of considerable impairment of vision, if the element of colour

did not come into play; *but he was unable to distinguish red-pine from yellow-pine, both looking yellow.*

In this case there was, as the ophthalmoscope showed, disease of the optic nerves, without any evidence of disease of the other structures of the eye, but there were symptoms which led me to believe that changes were also going on at the same time in other parts of the nervous system. These symptoms were only, however, temporary trembling of the legs, without evident cause, lasting for some time, a jerking up of the left leg, and a sensation of "pins and needles" in the toes—trifling as effects, but serious as signs of impaired nutrition of certain parts of the nervous system. I believe that they were signs of impaired nutrition in other parts of the nervous system coetaneous with—and not causing—the loss of sight. I suppose (how produced is another matter) that the anæmic condition of the optic discs signifies impairment of the blood-supply of the whole retina, and that this patient's loss of the power of seeing, and also of receiving a correct impression from light admitted into his eye, was due to some change, more or less permanent, in the retina itself, consequent on impaired nutrition, and yet in many cases of anæmic optic entrance there is no history of coloured vision. In many, however, there is; and red, and sometimes green "fogs" are mentioned:

CASE II.—I have notes of a case of one patient who first saw a blue cloud before his eyes, which subsequently became black, or as we may say of all these cases, that of the three colours which compose white light one only is seen, and then later none, *i. e.*, when the "cloud" becomes black. In this case it was clear that there was no other disease of the eye than atrophy of the optic nerve. In fact, when he first came, several observers considered that the fundus was normal; subsequently, however, there was no doubt that the optic discs were in the condition commonly called atrophy.

In both cases there was another symptom of interest, *viz.*, that the sight varied remarkably. The patient who saw yellow said that one morning, after having been excited, his "sight totally left him," and that in consequence, for a quarter of an hour, he could not see *at all*. He found, too, that his sight varied in the day. It was better in the morning, worse in the middle of the day, and better again late in the afternoon. In the other case, the patient, for a short time, recovered his sight entirely. He was a very intelligent man, and he described circumstantially what he saw, and what he was doing. This only occurred twice, and only lasted for about half a minute. I have said that I believed the loss of sight was due *directly* to what the ophthalmoscope showed, *viz.*, to local disease in the retina, and this from impairment of its circulation, from contraction of the bloodvessels, the result, as I believe, in all these cases, of some eccentric irritation—the *indirect* cause of the blindness. I admit that in neither of these cases was I able to fix on even a possible cause of irritation; but in other cases, in which the condition of the optic discs was similar, I have had more certain evidence that some eccentric irritation existed. In one case, from this condition of the optic entrance, I considered the diagnosis I had made of disease of the cerebellum was rendered certain, and such proved to be the case. Again, although this feature also is absent in this case, the suddenness of the attack is some evidence, I think, that this affection, like other forms of paralysis, is due to

eccentric irritation; and then, again, the sudden alterations in the sight would, I think, show that there could be no organic change *par excellence*, either in the retina or in the cerebral part of the organ of vision. I have found that these alterations take place only in the beginning of the affection. Of course, later, the continued defect of blood-supply produces permanent loss of function. We all admit cases of paralysis of a leg or arm in a child to be very often reflex, occurring *suddenly*, the paralyzed limb being cold, and ultimately wasting, the cause being probably, not a lesion between the nerves of the limb and the central nervous system, but some eccentric irritation acting on its bloodvessels. Then in other cases of reflex paralysis, as reflex paraplegia, sudden alterations of power are often well-marked. I should say then, that in this form of amaurosis there is some eccentric irritation acting on the vessels of the optic nerve and retina producing anæmia, and thus more or less loss of function. Dr. Brown-Séquard tells me that he has collected more than sixty cases of amaurosis connected with diseases of the cerebellum, produced, as he believes, by reflex action.

ART. 134.—*On the Absorption of Cataract by the frequent Evacuation of the Aqueous Humour.*

By Mr. J. G. HILDIGE.

(*Dublin Medical Press*, May 21, 1862.)

Mr. Hildige writes:—"I have been induced to make the following experiment on reading an extract from the *Gazette Médicale*, in which Professor Sperino, the well-known oculist of Turin, speaks in a highly laudatory manner of the practice of evacuating the aqueous humour for the purpose of absorbing opacities of the crystalline lens, giving the results obtained by this mode of treatment at the Hospital of Public Assistance at Turin.

"The Professor remarks—'The practical studies I have been continuing for several years on the new method of treatment in various disorders of the ocular bulb, have induced me to have recourse to it also in the case of persons labouring under cataract. The facts observed by me up to this day at the Ophthalmic Hospital, at the House of Public Assistance, and within the range of my own private practice, have proved to me that the evacuation of the aqueous humour effected daily, or even every second or third day, will gradually restore transparency to the crystalline lens, and consequently remove the obstacle which impedes vision. It is curious to observe how the opaque materials of the crystalline lens are gradually replaced by transparent ones, owing to the frequent removal of the aqueous humour, and it is not less consolatory to hear the patients daily congratulate themselves on the gradual recovery of their eyesight. At present I merely announce my discovery, but I shall soon publish my clinical observations, which are daily increasing in number, and I shall then describe the experiments by which I have been guided, the method of cure, its effects in the various kinds of

cataract, and different degrees of opacity of the crystalline lens; in a word, all I daily learn from the attentive observation of facts. Let me, however, remark, that, supposing in certain cases the mere evacuation of the aqueous humour were not found sufficient to obtain a perfect cure, this operation would still have the effect of restoring the functions of the inner vascular system of the eye, and would thus at all events prepare the patient by placing him in the most favourable condition for the operation on the cataract.'

"Taking the ciliary processes as the source from whence the aqueous humour and the nutrition of the lens are derived, and as we know that in almost all cases of long-continued iritis and iridocyclitis the crystalline lens becomes sooner or later opaque, owing to the arrest of its nutrition, might we not infer that anything that would produce hyperaction of the vessels from whence its nutrition is derived would tend to carry away any abnormal alteration or deposit in the lens itself, and thus effect an improvement of vision.

"Acting on this hypothesis, I determined to try the experiment, but as I had some misgivings as to whether a frequently repeated paracentesis of the cornea might not cause a too great irritation of the ocular bulb, I selected an eye that was not only cataractous but also partially amaurotic. The patient, Mrs. C., æt. 45, residing in Redmond's-hill, is affected with soft cataract in both eyes. That in the right eye is perfectly formed; the internal portion of the retina is, however, insensible to light, so that when a candle is held in the external part of the field of vision, at the distance of a few inches from the eye, it is not perceived; the other tissues of the eyeball are tolerably healthy. The vision of the right eye is still good enough to permit her to go about alone, and to see large objects. General health pretty good. I punctured the left eye with a broad-bladed needle at the external junction of the cornea with the sclerotic, and allowed the aqueous humour to escape. On the following day I repeated the puncture, introducing the needle at the inferior part of the cornea, and so varying the seat of the puncture each time, so as to cause as little irritation to the eyeball as possible.

"The eye was slightly inflamed on the third day, the pupil contracted, and other symptoms of irritation present, so that I was obliged to allow two or three days to intervene before resuming the treatment. It were needless to describe the effect of each paracentesis on the eyeball; let it suffice to say that I repeated the operation eleven times, allowing one, two, and three days to intervene, according to the amount of irritation present, and the following was the result of the treatment:—The cornea had become slightly conical, so that the interior chamber was much deeper than in the normal condition; the iris was of a much deeper tinge than that of the other eye; pupil contracted, and small dots of pigment, detached in all probability from the posterior part of the iris, were deposited on the anterior capsule of the lens. On dilating the pupil with atropine, one side of it was observed to be adherent, and masses of pigment were attached all round its circumference, protruding as it were from the posterior surface of the iris. The

lens was in every respect in precisely the same condition as it was previous to the commencement of the treatment, presenting the same degree of opacity without the slightest symptom of absorption having taken place in any portion of it. The effect of the frequent paracentesis was certainly to produce hypersecretion of the aqueous humour; this, however, instead of causing absorption of the cataract, produced a more or less staphylomatous condition of the cornea, the anterior chamber not being capacious enough to contain the quantity of aqueous humour secreted. This result has not justified me in experimenting on a second case, the eye having been decidedly damaged by the treatment. As Professor Sperino has, however, promised to publish shortly the notes of his cases, we shall then be better able to form an opinion of the question than we are at present."

ART. 135.—*On the Operation for the "Solution" of Cataract.*

By Mr. HAYNES WALTON, Surgeon to the Central London Ophthalmic Hospital, &c.

(*British Medical Journal*, June 14, 1862.)

This operation, commonly called the "needle operation," is, in Mr. Walton's opinion, as near perfection as possible. Mr. Walton further says:—

"I invariably operate through the cornea. I prefer this—the 'anterior operation,' so called in contradistinction to that through the sclerotica—the 'posterior,' because it is more definite and simple, less painful; only one coat of the eye is punctured, and the needle is never out of view.

"The thing above all others to be attended to—what I call the great principle in 'solution'—is to procure absorption of the cataract in its natural position—in *situ*. So immediately does this concern success, that, should I impress the rule on you, much will be gained by these remarks, if nothing else be remembered. The less the lenticular matter is displaced, the less subject is the eye to irritation, and therefore to permanent injury. The less, too, that the lens-capsule is torn in the early stage of the treatment, the less likely is it to contract adhesions to the iris, and therefore the more easy to be disposed of afterwards, should it obscure the pupil. The highest perfection, the best success, is to be got only with a central pupil free from any adhesions, and in an eye that has not been inflamed. I am never quite satisfied except the pupil be unaffected.

"At a first operation, therefore, I merely break the centre of the capsule, and penetrate the cataract sufficiently to admit the aqueous humour. Do not use the needle as a lever, making the cornea the fulcrum; for most assuredly, as the cataract is then the point of resistance, it will be twisted, and, with the slightest movement in the capsule, dislocation is almost sure to occur. You should pick at the spot you select, as if the cataract were outside the eye; and not carry the needle too deeply nor move it about too freely. Sometimes, when the vitreous humour is diseased, the cataract and

the capsule move on it, and it may not be possible to puncture even the capsule without producing this effect. It is only very lately that I made out the cause of the movement, which puzzled me for a long time. Another reason why the needle should not be used freely at first is, that as the lens-tissue swells very much on being considerably broken, the capsule may be pushed against the iris, when adhesion is inevitable. These parts always adhere when they touch in the course of an operation. Dilatation of the pupil may often prevent the contact; indeed, the artificial dilatation should be kept up till the cataract is absorbed, for this reason, and further, because that any portion of the cataract becoming separated may the more readily fall into the anterior chamber, where it is not so likely to produce irritation as in the posterior. A drop or two of a solution of atropine, of the strength of two grains to the ounce of water, applied on the conjunctiva on alternate days, or even every third day, will suffice. The frequent use is unattended with any disadvantage, except very exceptionally indeed—perhaps once in a hundred times, when it may irritate the surface of the eye. In such cases, the solution must be weakened, and used very much less often.

“The repetition of the operation under some weeks is positively unnecessary, and often hurtful. So long as lenticular matter is exposed—a fact that can be verified by viewing the eye in profile—nothing more is desirable. The falling back of the iris, by which it becomes concave, is a sure indication that there has been absorption. The same is indicated by the surface of the cataract receding.”

Mr. Walton strongly condemns what is called “linear extraction” for soft cataract, as advocated in Germany and copied in England.

ART. 136.—*Embolia of the Arteria Centralis Retinae.*

By Dr. LIEBREICH.

(Schmidt, 1862. No. 5.)

Liebreich deduces from six cases the diagnosis of this affection. All the patients, except one, suffered from recognisable heart disease; they each experienced a sudden sense of *clouding* before one eye, and, on closing the other, found that the clouding went on increasing, till, in a few minutes, the sight of the eye was altogether gone; nor did the perception of light ever return, except in some cases to the extent of a consciousness of a faint eccentric glimmer. On ophthalmoscopic investigation, the arteries of the retina almost universally bloodless, thin, and with here and there dark clots in them; later, coagulation appeared in the finest vessels, playing around the macula lutea, this spot being thus rendered abnormally distinct. Veins, thinner than usual, unequally filled. Always early in the disease, sometimes by the second or third day, structural changes commenced, especially a streaky clouding of part of the pupilla, which extended itself along the vessels, and at length formed an annular

greyish or milky cloud round the macula lutea; the central part remaining unclouded allowed the contrast with the deep red colour of the back of the eye to be more plainly evident. Small extravasations were perceived, especially between the yellow spot and the entrance of the optic nerve. The circulation in the veins was occasionally delayed or interrupted so as to give these vessels the appearance of a vermicular action. In the course of the following week the distension of the veins became more uniform, the arteries either became entirely bloodless and with hypertrophied walls, or else gradually filled to a certain extent, the clot then becoming pale, and the finest branches on the yellow spot becoming invisible. The annular cloud, in this case, disappeared from around the yellow spot, and instead there were seen small glittering points, of changing colours, grouped in peculiar ways, and capable at times of disappearing altogether. With the disappearance of the clouding and the extravasations commenced the last stage, that of atrophy of the optic nerve, which presented a tendinous, glittering, white appearance, and seemed slightly excavated.

ART. 137.—*New Operation for Ectropion.*

By Dr. PAGENTICHER.

(Schmidt, No. 6. 1862.)

In this proceeding, the outer commissure of the eye is divided in its whole thickness, so that the wound of the skin is from three to four centimetres, and the wound of the cellular tissue from two to three centimetres in extent; by a moderate traction this horizontal wound is then brought into a vertical position. The mucous membrane and skin of each side are then united, so as to prevent the wound reuniting. In this way the cleft of the lid is lengthened by from one to two centimetres, and a slight ectropion of equal extent is produced; at the same time, by the division of the sphincter fibres the operation of the inward contraction of this muscle is weakened. Ligatures are then applied, especially at the points where the turning in of the lashes is most pronounced, in the following manner:—The loose skin of the lid is pinched up with a hooked forceps, in a direction parallel to the border of the lid, in such a way as to include as many of the sphincter fibres as possible; the needle, armed with strong thread, is inserted at the base of this, and, engaging firmly the upper surface of the tissues, is brought out again a little outside the opening of the meibomian glands; the threads are then strongly tied, and are discharged by suppuration from six to ten days later. Usually from two to three ligatures suffice. By this plan pressure of the lid upon the globe is avoided, partly from the widening of the cleft of the lids and partly by the weakening of the sphincter-fibres: the rubbing of the lashes against the cornea is prevented, but the lashes are preserved, and their normal growth aided.

ART. 138.—*On Epidemic Night-Blindness.*

By M. BAIZEAU.

(Journ. de Méd. et Chir. Prat., and British Med. Journ., Oct. 19, 1862.)

Hemeralopia, almost unknown to civilians, is frequently observed in the army, and assumes in general an epidemic form. M. Baizeau carefully watched an epidemic of this description in 1856 at Lyons, among the soldiers of the 58th Regiment of Infantry, which he had charge of. The disease set in on the 28th of March, and during the month of April a great many cases occurred. The division was moved on the 16th of May to the camp of Sathonay: here nocturnal blindness soon became much more frequent, ceased at the end of the month, but reappeared after a few days. The regiment marched to Marseilles, hemeralopia followed, but exclusively attacked two companies under canvas. At the approach of winter, this inconvenient guest took his departure, but returned in the second fortnight of the new year. In April and May, 1857, M. Baizeau again had an opportunity of observing the disease in the army of Paris; after having followed a very irregular course, the epidemic at last yielded in July, 1858, since when but few cases have been noticed among the troops.

Hemeralopia is not in itself a dangerous affection, and seldom endangers vision, but it may entail serious consequences for men to whom the guard of an important post is assigned at night, or who may be required to march or take a part in offensive or defensive operations. General Bazaine, who was appointed Governor of Sebastopol after the capture of that city, has stated that so many men were then affected with night-blindness, that several regiments were so reduced as to be unable to supply the usual guards. Dupont in 1762 reported that the regiment of Picardy was attacked with this malady at Strasburg, and that several sentinels fell into the ditches at night. Accidents of a similar character have been noted during the numberless epidemics observed at various periods in French and foreign armies. Nocturnal blindness is not special to the land forces, but is also met with among marines and sailors. In September, 1847, the Rev. Mr. Coquerel had an opportunity of observing an epidemic of this description on board the *Belle-Poule* frigate, in the latitude of Madagascar, one hundred perfectly healthy sailors being affected in succession. It is not unimportant to remark that all those who have noticed night-blindness, whether at sea or on shore, Bamfield, Poulain, Biard, Valette, Bégin, &c., agree in stating that officers and non-commissioned officers escape the disease. M. Baizeau, out of upwards of three hundred cases, met with it only twice in officers; corporals, drummers, musicians, and non-combatant rank and file enjoy this immunity. The author shows that of all causes, sudden changes of temperature are the most powerful in producing night-blindness. Thus soldiers and sailors, exposed during night-duty to a cold atmosphere, after having endured in the day the heat of the sun, are much more frequently affected than from reverberation of light, or any other protracted cause of ocular irritation. Thus when an epidemic prevails M.

Baizeau advises that the men should be exercised in the shade, and that the hooded overcoat should continue in use at night for the sentries. For the same purpose M. Fleury proposes for the use of sailors in hot countries a broad-brimmed straw hat with a green shade beneath the brim; also that tents be erected on deck at night as a protection against the damp.

As to the nature of hemeralopia, M. Baizeau conceives the disease to be a neurosis of the retina, occasionally connected with a congestive condition of the eye and brain, but of so mild a character in general, that it seldom lasts more than four days, or a week at most. It is because the true nature of these spontaneous cures has been overlooked, that so many authors since Hippocrates have set too high a value on certain remedies of at least very questionable efficacy. Some patients, however, may remain for months blind at night, and in such cases vision is endangered, and an eventual cure becomes doubtful. The disease must not therefore be abandoned to the unaided efforts of nature, and medical art must interfere. Exposure to the sun in the daytime, to cold and damp at night, should be carefully guarded against. The men, when attacked by the disease, ought to be exempted from all duty, a precaution which, in nine cases out of ten, brings about a cure; but if the irritation of the retina is intense, repose in a darkened room is desirable, and if necessary, the azure tinted plane-glass spectacles, recommended by M. Sichel, should be used. The causes of hemeralopia being thus warded off, and complications, if any exist, being removed, the disease of the retina remains to be contended with. Amongst the many measures enumerated by authors as appropriate to the purpose M. Baizeau prefers steaming with hot water several times a day, and for a quarter of an hour at a time: this is the local treatment which the author has invariably found most effective. Subsequently to, or concomitantly with, the fumigations, cod-liver oil in a six or eight-drachm dose in the morning on an empty stomach, often produced the most satisfactory results. In some instances this method of treatment effected a cure in twenty-four hours; in others, two or three days were required, and the medication was equally successful in inveterate as in the most recent cases. Cod-liver oil must not, however, be viewed as an infallible remedy, applicable to all varieties of night-blindness. We have stated above that the disease is occasionally connected with cerebro-ocular congestion; when this occurs, another indication requires to be met to complete the cure and obviate relapse. This object is attained by mild counter-irritation, aperients, stimulating foot-baths, and if necessary, by dry cupping, or superficial scarification.

ART. 139.—*Loss of an Eye from the bite of a Leech.*

By Prof. Von GRAEFE.

(*Archiv. für Ophthalmologie*, vol. vii. p. 2, and *Glasg. Med. Journ.* April, 1862.)

CASE.—This is the case of a delicate little girl, of five years of age, who, some days before he saw her, had, on account of headache, been ordered a leech to the right temple. The eye itself before this application

had been quite healthy, and its vision perfect. He found the interior chamber filled with blood; the lower half of the conjunctival sac, including the edge of the cornea, ecchymosed; in the lower half of the cornea, nearly a line from the limbus conjunctivæ, a wound, the edges of which and neighbourhood were somewhat swollen, and presented a grayish opacity. The form of the wound, on close inspection, left no doubt that it was the result of the bite of a leech. It came out that, in making the application ordered, the leech had slipped away, had crept into the eye, and there, under considerable pain to the child, had accomplished its work of destruction. Unfortunately, perception of light was completely lost, apparently in consequence of total separation of the retina by hæmorrhage. Some time afterwards the blood in the anterior chamber had partly disappeared, the eyeball was already boggy, and phthisis oculi had commenced.

Professor Von Graefe observes, that the case, while on the one hand it serves as a warning against the careless application of leeches in the vicinity of the eye, is interesting in another respect, that the bite was not within the extent of the conjunctiva, but nearly a line from it, and in a part which in the normal state is deemed destitute of vessels. How far the leech filled itself with blood, and how long it sucked, he could not determine. The conjunctival ecchymosis terminated abruptly at the limbus conjunctivæ, from whence, in the direction of the wound, there was only a non-vascular infiltration. It is also possible, he observes, that no blood escaped by the wound, but that the strong suction alone caused the intra-ocular and extra-ocular hæmorrhage..

ART. 140.—*On the Analogy between the so-called "Periodic" Inflammation of the Eyes in Horses, and Glaucoma in Human Beings.*

By MM. A. VAN. BIERVLIET and J. VAN ROOY.

(*Ann. d'Oculist.*, xlv. p. 125. Von Sichel, *ib.* 181.)

The analogy between these two diseases is said by MM. Van Biervliet and Van Rooy to be very close. The disease in horses is characterized by symptoms which represent an irido-choroiditis which only differs from glaucoma in so far as the latter implies a serous inflammation, whereas in the disease of horses plastic matter is exuded in the interior of the eye. MM. Van Biervliet and Van Rooy having appealed to veterinary surgeons for an expression of their opinion on this matter, Von Sichel publishes the details of a great number of dissections of the eyes of horses, on which he grounds an opinion unfavourable to the identity of the two diseases. The only points of similarity, he says, are the periodicity of the attacks, and the blindness which is the final result. The membrane of Descemet, which in the disease in horses is frequently inflamed, and forms adhesions with the iris, and this again with the capsule of the lens, is hardly ever inflamed in glaucoma. In the former disease a sero-albuminous exudation between the choroid and retina leads to the total loosening of the retina: and frequently there are ulcers of the cornea, closing of the pupil, absorption of the lens and of the vitreous humour. M. Von Sichel thinks it doubtful if iridectomy would be of any use in the periodic disease of horses.

ART. 141.—*On Obstructed*

By Mr. W. WHITE COOPER, Surgeon.

(Lancet, June 7, 1851.)

In the lectures on “*Memorabilia in Practice*,” to which we have already alluded, Mr. Cooper says:—

“I have found this combination of the sac and pad, in the treatment of obstruction of the lachrymal duct with an auxiliary have made use of the process. The cases in which this is necessary, the passage into the nose is not entirely closed. Mr. Leicester-square, has at my request, a spring, by which pressure, on the principle of the pad and pad, is maintained. The spring is adjusted in the first instance, and is applied on the sac nor on the forehead is sufficient to support the weakened sac. The mode of use is simple: the sac is pressed with the finger, and the pad is worn, this can be worn the better; but it should be worn it for an hour, to remove it for an hour, and so on; regulating the intervals according to the feelings of irritation excited. Some persons assure can only be borne for a short time. As the surface of the pad becomes moist, the moisture of the eye, a small piece of it and the skin, whereby excoriation is prevented.”

“An excellent lotion to be used in the treatment is formed of one or two drops of iron in an ounce of distilled water; the astringent influence is decided, and it has a good action to the lining membrane of the lachrymal duct.”

“Slitting up the canaliculis is a valuable operation, in the expectation in one class of cases; at least, the result of several patients who have consulted me, has gone the operation. The cases to which I refer, no inconvenience is experienced when the patient is in a warm or still atmosphere, but exposure to cold, especially in the winter, excites a profuse watering of the eyes, which is a great discomfort. It appears to me that in such cases, the tear-ducts than in the secreting organs; in fact, that the channels are morbidly contracted, but the contraction is too great, and is due to an extreme sensibility of the eyes from undue excitability of the branches of the nerves, whereby the lachrymal gland is over-stimulated. The treatment should be directed to this point.”

“As a rule, I am by no means an advocate for c

too much, and think that the very general custom of wearing veils is productive of more harm than good. But much comfort is derived in the cases in question from the use of a gauze shade to protect the eyes from the current of cold air. By some patients preference is given to protectors, the glass being encircled with gauze side-pieces; this material is preferable to metallic wire, which is too heavy, and is too much influenced by temperature. I disapprove of the metallic wire eye-protectors, which are joined together and fixed on the head by elastic bands. The pressure of the frames against the edge of the orbit is painful, and the constriction of the band around the head is absolutely hurtful.

"After the Indian mutiny and subsequent campaign, during which the British troops were subjected to the greatest hardships and most trying exposure by night and by day, I saw many cases of injury to the eyes from these causes. In one case, that of an officer of a regiment of Native Horse Artillery which had mutinied, and who for many days and nights was obliged to lie hid in the damp jungle with scarcely ordinary clothing, a brown cloud had appeared before his eyes, with so much impairment of vision that he with difficulty made out the largest type. The ophthalmoscope showed a peculiar haze at the posterior surface of the lens, apparently from inflammation of the capsule, with deposit. The officer had suffered severely from rheumatism and sun-stroke, and there was manifestly deficiency of nervous power in his eyes, in addition to the visible haze, as that was by no means sufficient to account for the great imperfection of vision. He derived much benefit from iodide of sodium, the superphosphate of iron, and free counter-irritation.

"Of chronic ophthalmia I saw numerous examples. The characteristics were: dark and turgid palpebral conjunctivæ; papillæ elevated and hard, imparting a distressing 'sand-paper' feeling, as one of the sufferers expressed it. The treatment which afforded much relief was, opening the eyes in cold water twice or thrice daily, and the use of drops composed of tannic acid dissolved in water with a sufficient quantity of gum acacia added to render it slightly mucilaginous. In ordering this I may remark that the gum itself, not the mucilage, should be prescribed, as the mucilage has a strong tendency to become acid, and when so is highly irritating to the eyes. A fresh solution of the gum should always be made.

"In a few cases so much thickening had taken place that some eversion was caused: free scarification of the lids, in addition to the other treatment, was here adopted with advantage."

ART. 142.—*On the Treatment of Chronic Obstruction of the Lachrymal Duct.*

By Mr. WILLIAM OLIVER CHALK.

(*Lancet*, July 5, 1862.)

Referring to the subject of the last article, Mr. Chalk writes:—"Under the head of 'Memorabilia of Ophthalmic Surgical Practice,'

by Mr. W. White Cooper, I observe some remarks on the treatment of chronic obstruction of the lachrymal duct by pressure on the sac with an instrument (constructed for him by Mr. Bigg, of Leicester-square) on the principle of a truss-spring and pad. I have not yet had an opportunity of seeing it; but during the last two or three years I have been in the habit of using at the Marylebone Eye Institution, an instrument *similar in principle*, and devised for a like purpose. It consists of a piece of watch-spring, rather more than one-eighth of an inch in width, and of sufficient length to pass over the forehead to the back of the head. A piece of gutta percha is attached to either end, the one small and moulded when in a plastic state to the parietes of the emptied sac the other larger and spread out at the back of the head, to which a narrow riband is fastened that passes round the forehead, and, when tied at the side of the head, keeps the spring *in situ*, and secures the requisite amount of pressure. Latterly, however, I have modified this plan, using only a short spring, fastened by means of a small piece of gutta percha to the riband that goes round the forehead and is tied at the back of the head, and again secured by two other pieces of riband sewn to the sides thereof, and tied at the top of the head. In fitting the spring, care must be taken to curve the ends a little outwards before moulding the gutta percha thereto, otherwise they will penetrate it and abrade the skin. This is easily done by exposing them to a red heat in the flame of a spirit lamp, and whilst in this state making the requisite curve with a pair of pliers."

ART. 143.—*On the use of Atropine-Paper for Ophthalmic Purposes.*

By Mr. STREATFIELD.

(*Ophthalmic Hospital Reports*, April, 1862.)

"This paper is simply a coloured tissue-paper imbued with a solution of the sulphate of atropine, of such strength that a small square piece of it, of a certain size, is equal to or contains as much of the salt as a drop or minim of the solution of a strength in ordinary use. The paper, soaked in the strong solution, is hung up to dry, and turned about while drying, that the atropine may be equally distributed. The little piece of the paper to be used, one-fifth of an inch square, is taken up on the tip of the fore-finger, previously dampened; and the patient's lower lid being drawn down, he is told to look upwards, and the scrap of paper is put on the sclerotic conjunctiva below the cornea almost without the knowledge of the patient; the lid is then let go, and the piece of paper is left between the ocular and palpebral conjunctivæ; a handkerchief is then tied over the eye that the lids may be kept closed for awhile.

"The atropine thus used has, I find, acted at least as well as the drops of the solutions that are commonly employed; I think, as is likely, it has acted more powerfully than the drop of any equiva-

lent solution, of which so small a quantity really remains under the eyelids when they are closed after its instillation. The tissue-paper becomes at once wet and soft with tears, lies flat on the eyeball, and creates no more conjunctival redness or lacrymation than the drop of solution.

"At first, when the present plan suggested itself to me, I used white paper, but this soaked in tears becomes transparent, and is hardly distinguished from the conjunctiva; since then I have adopted green paper, for red might not be plainly seen in any case of external redness of the eye, and strips of blue or yellow paper might be mistaken for litmus or turmeric paper. The green paper is always easily recognised; it contains neither copper nor arsenic. In a quarter of an hour, or whenever the mydriatic effect is produced, the scrap of paper is easily removed with the tip of the fore-finger from under the lower lid, which is depressed for the purpose; if the little piece has got under the upper lid, it will be floated down by shutting and opening the eye a few times, and may be wiped out as before without any difficulty.

"The sole object I had in view when this paper was first prepared for me was, as I have said, the convenience of those who, like myself, have constantly to be provided with atropine for use. I have carried about a small bottle of the solution in my pocket, and sometimes I had left it at home when I wanted it, but now I have always in my pocket-book some of the paper ready for use, almost without weight, occupying hardly any space, and making no separate item to be remembered. A glass bottle may be protected from breaking, or escape of the fluid, but all bottles are cumbersome; and the many different kinds of atropine drop-bottles, almost every oculist having his own pattern, prove that there was no very convenient method of carrying the agent which in practice we most require; the paper will, I believe, be found not only convenient in this way, but very efficacious. Its portability is perhaps the great advantage of the atropine paper; but, recollecting the small quantity of any solution dropped into the eye that is probably retained when the lids are closed, and its further dilution by the flow of tears generally produced, I think the atropine paper may be proved to be very powerful in those cases in which the *greatest* mydriatic effect is desirable; for the whole of the dose used is first placed within the lids, and lacrymation at all does not usually follow the use of the atropine paper, therefore I have been using it in cases of old synechiæ before operating for their detachment. The salt in the meshes of the paper is dissolved out gradually, and with very little if any increase of tears, is mixed with them to spread itself over the surface of the conjunctiva. Having thus explained the mode of its operation, I intend to try if the same paper vehicle will not be advantageous in the use of other drops and lotions for the eye. Perhaps a strip of paper, soaked in a strong solution of sulphate of copper, cut of the size of the cartilage of the upper lip and laid upon its under surface when the conjunctiva is 'granular,' will not improbably act more efficiently than the drop of solution of the same salt, and less painfully than when it is applied in the solid form, the greater effect being

attainable by the *real* use of as much of the salt as is contained in an ordinary drop of the solution used, and the pain being, I suppose, mitigated by a *gradual* application of the sulphate of copper instead of its being used at once in the solid form; but this remains to be proved.

"The small space the atropine paper will occupy in the pocket is not the only convenience to be found in its use. It does not alarm timid patients, as a bottle of drops (believed to be 'caustic'), and a quill, brush, or glass tube brought up to the eye does. Children are often then quite intractable, and if they cry the atropine solution is often too much diluted to be of any use. The atropine paper, it will be observed, can never become a common mode of employing the agent by the patients themselves, for very few of them or their friends could be trusted to put the paper properly into the eye, or safely to wipe it out again. The atropine paper is, again I state, only brought forward by me for the use of the surgeon himself, chiefly for convenience, and also for greater efficiency in some cases in which the greatest effect is desirable.

"The atropine paper, as I have described it, is prepared by Mr. Squire, chemist to her Majesty, 277, Oxford Street, London; he will, as I have requested him, send any one who will try the new vehicle a specimen by the post. The paper has been dipped in a solution so strong that a piece of it, one-fifth of an inch square, contains as much of the salt as a drop of the solution of two grains to an ounce of water."

ART. 144.—*A Binocular Ophthalmoscope.*

By Mr. J. Z. LAURENCE.

(*Medical Times and Gazette*, July 26, 1862.)

In a letter to the Editor of the *Medical Times and Gazette*, dated July 26, 1862, Mr. Laurence says:—"It was my friend Dr. Giraud-Teulon, of Paris, who first perceived the advantages of a binocular ophthalmoscope over the monocular ones in general use. He took a large concave mirror and scratched off the metallic back-coating in a horizontal line of about $1\frac{3}{4}$ inches across, and about $\frac{3}{8}$ inch breadth. But with this instrument he found that the general result of its binocular use was that the person saw the papilla optica and other parts of the fundus double. "By a continued and persistent effort of exaggerated convergence, one may succeed at last in fusing these two crossed images." ("Physiologie de la Vision Binoculaire." Paris: 1861. P. 678.) Dr. Giraud-Teulon finding for this and other reasons, which he adduces, the practical inutility of such an instrument, devised an ophthalmoscope, in which by two respective total reflections from a pair of glass rhombs, the aerial image of the fundus oculi, formed in front of the objective, was doubled, and the two images then made to coalesce by a pair of Brewster's prisms. This instrument (of which a description may be found at page 679 of the work before cited) is very complicated; so much so, that several eminent ophthalmic surgeons in this

country have given it up in despair. This, however, I think going too far, as with a little personal instruction from its inventor, I am able to manage the instrument very well.

"It is to bring before the notice of the profession a binocular ophthalmoscope of my own that I have penned these few lines.

"It consists simply of a concave mirror of about the size of that used for examining the throat. This mirror has two eyeholes, through which the observer looks. It differs also from that of the ordinary ophthalmoscope in having its apertures lateral, instead of central. Thus the centre of the mirror is taken advantage of instead of being lost for reflecting purposes. With this instrument I observe quite as much relief ('stereoscopic effect') as with Dr. Giraud-Teulon's more complicated one. My ophthalmoscope leaving each eye its natural play, does not fatigue the observer like the ordinary one, to use which most persons are obliged to close one eye. On account of the large reflecting surface, a circle of diffusion is obtained much superior in size to that by the ordinary instrument. I have not yet had sufficient time to study the different properties of the instrument fully; but for the present merely recommend it for the simplicity of construction, by which the great desideratum of binocular vision is obtained.

"In using my binocular ophthalmoscope, the light must be placed *above* the patient's head, in a line with the eye to be examined. I think experience will prove my instrument to be exactly as superior to the monocular one as vision with two eyes is superior to that with one.

"It may be had at a trifling cost of Messrs. Weiss, who at my wish are also adapting eye-pieces to the two apertures for the purpose of viewing the direct image, &c."

ART. 145.—*Restoration of an Amputated Nose.*

By Dr. JOHN GASON, of Rome.

(*Medical Circular*, July 30, 1862.)

Dr. Gason finds the following account in an Italian newspaper, the title or date of which he does not furnish:—

"A. C., a Milanese gentleman of undoubted courage, which he proved not only in the late war of Italian independence but in various duels in which he was engaged, was insulted a short time back by a young Neapolitan officer, who was also well skilled in arms. A hostile meeting was agreed on. When they reached the ground the two combatants crossed swords, and, after a few passes, which they both dexterously parried, Signor A. C. slightly wounded his adversary in the left arm. Unfortunately, neither the wounded man nor the seconds took any notice of the accident. Signor A. C. was thrown off his guard by this occurrence, when the other, by an unexpected sword-cut, sliced off a large portion of his adversary's nose. At the sight of this wound the seconds interfered between the two combatants. Signor A. C., stooping down, picked up the piece of his nose which had fallen to the ground, and, presenting

it to his opponent in a joking manner, said 'I congratulate myself on the beautiful cut which you have given me. I ought to leave my nose with you as a trophy of honour; but, if you are so good as to allow me the benefit of it for my life, I shall be very much obliged to you.' The young officer, full of wonder at this singular *sang froid*, seized his adversary's hand and squeezed it. A. C. then turning to the medical men, said, 'Gentlemen, put this tool in its proper place; it is indispensable to my comfort, as I have contracted a habit of taking snuff.' The operation was performed on the spot, and with the happiest results."

ART. 146.—*Bleeding at the Nose Checked by increasing the frequency of the Respiratory Movements.*

By M. PIORRY.

(*Journal of Practical Medicine and Surgery, and Medical Circular,*
May 14, 1862.)

CASE.—On the 22nd of February, a man, aged thirty, was seized with copious bleeding from both nostrils. Injections with a solution of sesquichloride of iron having failed in checking the hæmorrhage, plugging was resorted to, and the blood continued to ooze out for five days. On the 27th the patient was admitted into M. Piorry's wards, and on the same evening, the epistaxis having returned in an alarming manner, the house-surgeon on duty replaced the external plugs, by lint impregnated with sesqui-chloride of iron. On the 28th the bleeding appeared to have nearly stopped, and a mixture containing the same hæmostatic was prescribed. But during the ensuing night a fit of coughing induced a sudden relapse, which was in vain contended with until morning.

On the 2nd of March the countenance of the man was death-like, the skin was cold, and the pulse weak. Vision now and then became dim, but consciousness was fully preserved, although blood still continued to escape.

M. Piorry, recollecting that he had succeeded on other occasions in checking hæmoptysis by deep and frequent inspiration, conceived that the same method might here prove beneficial. The man was therefore directed to sit down, the plugs were removed, and he was instructed to breathe freely and often.

The hæmorrhage was immediately checked, to the great satisfaction of all present.

Herb juices were then prescribed and ligatures were applied above the calf of the legs, and at the upper part of the forearms. The bands were removed in a few hours, and no relapse having occurred the patient left the hospital on the 7th of March entirely cured.

ART. 147.—*A Disease of the Nose and Cranial Sinuses, prevalent in the Zillah Rohtuck, in the Punjab.*

By Mr. R. T. LYONS, Officiating Civil Assistant-Surgeon.

A severe inflammation of the mucous membrane of the nose and the neighbouring sinuses attended with the presence of swarms of maggots, prevails to a great extent in this Zillah. In the popular

opinion it is regarded as a primarily parasitic disease ; but farther observation is perhaps necessary before its real character can be determined.

Seen in the advanced stages, the disease is one of the most loathsome that comes under the observation of the medical man. Invariably there is a depression or flattening of the bridge of the nose, and tenderness on pressure ; a discharge, not generally profuse, of pus, often dark or discoloured, and of exceedingly fœtid odour, perceptible at a distance from the patient. There is racking pain, which the sufferer attributes to the movements of the worms, in the forehead, temples and cheeks, often swelling and redness of the latter and of the eyelids ; deep seated pain in the skull, and at the occiput and vertex. The mucous membrane of the nose is red and raw : the patient snuffles in speaking, like a person suffering from catarrh. Occasionally the eye suffers, becoming injected and suffused with tears. Often severe fever is lighted up, and sometimes diarrhœa is observed. The colony of worms, numbering a hundred or less, appears to be very deep-seated, concealed in nooks and corners in the nasal sinuses, and perhaps also in the more remote sinuses of the ethmoid, sphenoid and frontal bones. The worms are exactly the same, to the naked eye, as those sometimes observed in large superficial ulcers, and that are generally considered to be the over-fed larvæ of the common fly, in which the usual metamorphosis has not occurred.

In a mild form, or more properly, in a less advanced stage, the disease appears to give little uneasiness, the worms either not existing or their presence not being felt. The individual pursues his ordinary avocation ; the disease of the nasal mucous membrane destroying the sense of smell, renders him less offensive to himself than he is to his neighbours.

So far as Mr. Lyons has been able to ascertain, the disease seems limited to the poorer classes of the agricultural population. The subjects are mostly ill-fed, emaciated, and of scrofulous constitutions ; if men, poor, out of work, and starving ; if women, aged, or enfeebled by long suckling. On inquiry, he has not discovered a single instance of the disease amongst the better classes of the native population. It has never occurred amongst the few Europeans in the district, and to some of these its existence was not even known.

The disease, extensive and distressing as it is, is not fatal. An individual may be subject to it for years, and live, notwithstanding, to some age. It is seldom that opportunity occurs of ascertaining the ravages of the disease by *post mortem* examination. By chance an opportunity did occur in the case of an aged female prisoner in the Rohtuck gaol, who died while suffering from the disease. Hers was an exceedingly aggravated case, the irritative fever ran high, and colliquative diarrhœa finally set in. For a month previously to her death, worms to the number of nearly a hundred, dropped from her nose at various times. She suffered much from deep-seated pain in the skull, and had likewise a constant watering or weakness of the eyes. Mr. Lyons could not ascertain accurately her previous his-

tory, but she had been in prison for nearly two years, without the existence of the disease being suspected, or known to the medical officer. On removing the brain, previously to making a section through the nasal fossa, a drop of pus was found at the situation of the *foramen cæcum*, through which it had escaped from the nose. There were no other morbid appearances in the cavity of the skull, (nor had there been any symptoms of cerebral affection during life). On dividing the anterior half of the skull longitudinally, very extensive disease became apparent, involving not merely the nasal fossæ, but the ethmoidal, frontal, sphenoidal and occipital cells, both antra, the anterior palatine canal, and also, to a less extent, the nasal ducts and conjunctivæ. The mucous membrane was pulpy, easily separable, congested, mottled, or dark and sloughy in patches. There was a clear, thick, gelatinous fluid in the occipital, sphenoidal and ethmoidal sinuses, and in the right antrum; pus in the nasal fossæ, with débris of the bones, and also abscess in the left antrum and anterior palatine canal, the latter being preternaturally enlarged. There was caries of the inner surface of the nasal bones, of the middle turbinated bones, one of which had almost disappeared, and of the central lamella of the ethmoid, which was perforated. The septum, both vomer and cartilage, was intact. A preparation of the above was forwarded to the Pathological Museum at Calcutta.

Whether this disease is primarily parasitic is a question which requires further investigation. In the opinion of the people it is so considered, and so commonly named; and in the official returns of the gaol and government dispensary it appears likewise to be so regarded, and is somewhat ambiguously named "Vermes." Mr. Lyons is inclined to believe that the disease is essentially a scrofulous inflammation of the schneiderian membrane (*ozæna*) of an aggravated character, and under circumstances of uncleanness and neglect spreading to a considerable extent along the continuous membrane of the cranial sinuses, attacking the bones, and becoming, from its offensive discharges, attractive to the domestic fly for the deposit of its larvæ. Most of the conditions attending the disease are favourable to this view of its nature; the strumous and debilitated constitution of its subjects, its limitation to the poorer classes, who are also the most uncleanly in their personal habits, and its absence amongst Europeans and the better classes of natives. That the pain, distress, and structural ravages of the disease are greatly aggravated by the presence of the worms does not admit of doubt: but whether these consequences follow upon the primary occupation of the cranial sinuses by the colony of worms, requires farther observation to be definitely decided.

The uncertainty regarding the nature of the disease does not, fortunately, re-act on the methods employed in relieving or removing it. The indications for the treatment are self-evident, to remove the worms and to improve the health of the individual. The plan adopted for removing the worms is very simple, but effectual. A roll of lint steeped in turpentine, or in alcoholic infusion of *Cameela*, is put into each nostril, and very speedily effects the dislodgment of the colony. Any weak astringent lotion is then injected into the

nostrils, to wash out the foul discharges, and to stimulate the diseased surfaces to healthy action. The steady administration of cheretta, the grand tonic of India, with the addition of iodine, or better, of the iodide of potassium, with good food and attention to hygienic conditions, constitute the essentials of general treatment. Anodynes, fomentations, and, rarely, leechings on the forehead or nape of the neck, aperients, diaphoretics and astringents, are also called for to allay the severe pain in the skull, to subdue fever, or to check diarrhœa.

ART. 148.—*Root of a Canine Tooth lodged in the Lower Lip, and simulating a Cancerous Tumour.*

By Dr. ZANDYCK.

(*Bulletin Médicale du Nord de la France, and Schmidt's Jahrbücher*, No. VI., 1862.)

CASE.—A lady, aged about 40, had suffered for a long time much inconvenience from her teeth: only two or three sound ones remained, with a number of diseased stumps, the alveoli were ulcerated and partly destroyed: the stumps spongy and constantly bleeding. At last a tumour began to develop itself in the lower lip, and rapidly filled up the interval between the lip and the gum; at length it became adherent to the latter, and was a source of constant pain. Cauterization with nitrate of silver was commenced by the medical attendant, but as the patient was pregnant this had to be discontinued for two or three months, to allow the accouchement to pass over. The tumour presented all the hardness, and was the seat of just the lancinating kind of pain which characterizes cancer, and on its surface was an ulcer, with hard, elevated margins, from which issued a foetid discharge. Upon resuming the cauterization with more vigour, M. Zandyck one day encountered resistance from a hard substance, which he was satisfied was a foreign body; and having made a crucial incision, extracted a long root of a left canine tooth, covered with a thick layer of calcareous matter. The adhesions between the lip and the gum were freely divided, and in a fortnight the wound had soundly healed.

ART. 149.—*On the Employment of the Metallic Suture in the Operation for Hare-Lip.*

By M. OSCAR ANSIAUX.

(*Presse Médicale Belge*, No. 25, 1862, and *Medico-Chirurgical Review*, October, 1862.)

In this paper the author relates some cases of operation performed by his father, Professor Ansiaux, of Liege, in order to exhibit the superiority of the silver suture over the twisted suture in the treatment of hare-lip. He usually unites the pared edges by means of two or three points of suture, adding another at the lowest extremity of the wound, in order to obviate the notch which often persists after the operation. The sutures, in the cases cited, were removed at the end of from the eighth to the thirteenth day, leaving the line of union complete. The higher the lip, the greater the number of sutures is to be employed; and by their aid a complete approxima-

tion of the entire surfaces may be effected, avoiding the partial tractions and consequent sections consequent upon the twisted suture. It is essential, however, that the sutures traverse the entire substance of the lip. There is a great difference in the effect upon the tissues produced by the pins of the twisted suture and the silver sutures. The former are rigid and voluminous, while the latter are flexible and thin; and the ulceration, and even gangrene, sometimes consequent on the use of the one, are not met with after the employment of the other. The advantages of the silver suture are, in fact—1, its prompt and easy application; 2, the exact and continuous approximation of the surfaces is attainable; 3, ulceration or section of the tissues is not to be feared; 4, it may be retained as long a time as may be required to secure complete union; 5, it allows of the performance of the operation on infants after the first fortnight.

ART. 150.—*New Operative Proceeding for the Cure of Hare-Lip.*

By M. SEDILLOT.

(*Gazette des Hôpitaux*, No. 130.)

M. Sedillot brings forward a new operative procedure to remedy the atrophy and shortening of the upper lip, which is so serious an obstacle to the cure of double hair-lip; the principle of his method being to obtain new material from the cheeks. His plan is as follows:—On each side an incision of from two to three centimetres in length is made, obliquely upwards from the fissure, into the cheek, the edges of the cleft in the upper lip are then vivified, with the exception of the red border; the median flap is then cut to a V shape. By this measure suitable flaps from the cheek and lip, on each side, are set free; the two flaps are then brought down and united to each other, beneath the median flap, and also to the latter. Finally, the untouched border of the lip is stitched to the now lengthened lip. By means of the bringing together of the flaps from the lip and cheek, not only is the substance of the upper lip increased, but the flattened-out nose is elevated.

ART. 151.—*New Knives for Cleft-Palate.*

By Dr. P. CRAMPTON SMYLY, Surgeon to the Meath Hospital, Dublin, &c.

(*Medical Times and Gazette*, June 7, 1862.)

Several knives have been devised for the division of the muscular fibres which act upon the soft palate. Mr. Fergusson at first employed the rectangular knife of Warren; subsequently, one bent on the edge, as effecting in one cut what the other did in several. The peculiarity of his practice consisted in dividing the levator palati, and any fibres of the tensor that are inserted into the velum, by incision from behind. Mr. Pollock has devised a knife by which the muscles of the velum can be divided from the front. It is thrust

through the soft palate immediately internal to the hamular process, and by describing a curve along the edge of the palate bone, cuts off all fibres of the levator and tensor muscles.

"When operating for cleft-palate some time ago, I employed," says Dr. Smyly, "Mr. Collis's knife. The muscles seemed to me to hang before the edge of the knife, and I did not effect a complete division on the right side. It struck me at the time, if I could fix the muscles the division could be accomplished more easily and effectually. I found that by pressing the first finger against the velum, in front of the hamular process, the structures of the soft palate could be easily fixed. With my finger resting on the velum of the subject, and the mouth filled with my hand, I found it impossible to introduce Mr. Collis's knife. It then occurred to me that the nostril was the direct road to the upper surface of the palate. I had a small sickle-shaped knife made, with a long, fine, round handle, this I passed along the floor of the nose, the point turned upwards, until I felt the back with my finger in the mouth, the point was then turned downwards; by withdrawing the knife until the point touched the margin of the palate bone the cutting edge passed between my finger and the hamular process, dividing every muscular fibre which could act on the soft palate. The requisite incision was much shorter than that made by either Mr. Fergusson's or Mr. Collis's knives.

"I have devised a second knife, with which the separation of the greater part, if not the whole, of the soft parts and periosteum, necessary to be separated from the hard palate, may be accomplished through the nostril, thus leaving the mouth free for the operator to see what his knife is doing. The blade is rectangular, in a line with the handle of the knife; the lower and internal edges are sharp. It is introduced through the nostril, into which the cleft opens, passed backwards to the end of the palate bone; by drawing the knife forward an incision is made the whole length of the ridge, the separation from the surface of the hard palate is then effected with the lower cutting edge. The finger of the left hand may be introduced into the mouth, and by pressing on the back of the knife assist in the separation of the periosteum.

"My colleague, Mr. Collis, employed this knife a few days ago in a case of complete fissure through hard and soft palate and maxillary bone; the hare-lip had been previously operated upon. He expressed himself much pleased with the way my knife did its work. More than half an hour was saved in the first part of the operation.

"Since the above was written, I have employed both my knives in a case of fissure through both hard and soft palate. The fissure of the hard was not complete; the division of the muscles was most satisfactory, and the hæmorrhage was very slight indeed in comparison with my former case."

ART. 152.—*On Enucleation of the Tonsils with the Finger.*

By M. BERNARDINO.

*(Journal of Practical Medicine and Surgery, and Medical Circular,
May 1, 1862.)*

The *Gazette Médicale de Lyon* reproduces from an Italian periodical the description of an old procedure revived by M. Bernardino, as a substitute for the knife, or Fahnstock's instrument.

This plan consists in the eradication or enucleation of one of the tonsils with the finger. M. Bernardino is of opinion that the removal of one of the tonsils is amply sufficient to remedy the bad effects of the hypertrophy of both these glandular structures, and he supports his view on a somewhat quaint argument. If two neighbours quarrel, it is unnecessary to turn out both. Peace will be at once restored by the expulsion of the most noisy and troublesome of the contending parties.

This surgeon proceeds as follows :—For the left tonsil, as in a recent case which he operated on, April 22, 1861, he inserts the tip of the left forefinger behind the apex of the gland, and gradually descending, extracts the latter, by laceration with the nail, from its receptacle. The operation is represented as easier than excision with the usual amygdalotome, and no hæmorrhage need be apprehended.

Mr. G. Borelli followed this plan with equal success in an operation he performed on the 23rd of August, 1861. In general, a small fragment of the tonsil remains, not large enough to be torn away with the finger, but it can readily be removed with a common forceps.

ART. 153.—*Remarks on Injections into the Middle Ear.*

By M. TRIQUET.

*(Journal of Practical Medicine and Surgery, and Medical Circular,
July 9, 1862.)*

Scarcely was Eustachian catheterism introduced into practice, when the possibility and expediency of conveying, by means of this operation, into the middle ear, simple or medicated fluids and gases of various nature, became a subject of discussion.

At the beginning of the last century, the scientific world was startled by an important discovery.

An obscure and previously unknown person, a common post-master, who was completely deaf, and had in vain sought relief from empirics, impelled by a desire of curing himself, endeavoured to master the complicated anatomy of the ear.

He acquired the needful information from an attentive study of Duvernoy's work, and a careful inspection of his valuable engravings, illustrative of the structure of the organs of hearing, and at last succeeded with a lead catheter in reaching the Eustachian tube through the mouth; he then adapted a syringe, filled with tepid

water, to the orifice of the metallic appliance, and injected the liquid. In a few days he was cured; after the third operation, he suddenly recovered his hearing as perfectly as he had ever possessed it.

This discovery was soon confirmed by further experience; its importance at once became obvious, and it has now assumed a prominent place in the history of surgical science.

This is an unquestionable instance of the cure of deafness by the injection of tepid water into the Eustachian passage; it is recorded at full length in the minutes of the Academy of Sciences for the year 1724, and the *Arsenal de Chirurgie* of Garengéot, which was published at the same period, further supplies us with a description and diagram of the instrument.

This remarkable case was at first received with slender confidence; the post-master, however, found many imitators, but to say the truth, the results were of the most disheartening nature.

The theorists of the day expatiated, of course, on the perils of the introduction of a foreign body like water, by means of a coarse contrivance, into delicate structures, invested with mysterious functions, and containing nought but what was termed innate air.

These erroneous but plausible objections exercised the most fatal influence on the new and valuable discovery, and sinking beneath the shafts of well-directed ridicule, it fell into the deepest and most undeserved oblivion.

Now that the violent prejudices brought to bear against the method imagined by the deaf post-master have long been dispelled, the important inquiries it suggests may be dispassionately entered into.

A few words in explanation: we all are aware that the mucous secretions of the nasal fossæ are capable of acquiring extreme consistency, and of adhering to the Schneiderian membrane with a degree of tenacity which can be conquered only by injections of tepid water.

The lining membrane of the Eustachian passages is but the reflection of the mucous structures of the pharynx and nares, and inflammatory action is readily propagated from the latter to the former. The secretion, whatever its abundance, undergoes in all similar changes, and may entirely obstruct the tubes. Now the diameter of the Eustachian channel being at its most contracted part—i.e., at the junction of the cartilaginous with the osseous segment—but the fourth part of a line, a small amount of desiccated, hard, and adhesive mucus will readily occasion temporary obliteration of this small cavity, and promptly induce complete deafness.

This was certainly the case in the instance of Guyot, the post-master above alluded to, who first succeeded in injecting tepid water into the middle ear. Deafness is not, however, the result of one efficient cause only, and the same treatment applied in all varieties of copiosis cannot be expected to prove always triumphant.

The truth of this remark soon became evident; but as the causes of the different kinds of deafness are now perfectly well known, and

point to the rational and methodical management of each, the objection falls to the ground.

These discouraging failures were not, however, entirely destitute of utility, and led to the discovery of several new modes of introduction of medicated fluids into the middle ear when the injections of pure water had fruitlessly been resorted to.

Valsalva, Busson, and Munnichs had already conceived the idea of prescribing the inhalation of the vapours of odoriferous flowers, such as those of melilot, marsh-trefoil, &c., and causing them to pass into the Eustachian tube during forced expiration, the nose and the mouth being closed.

The notion of using medicated air in the treatment of deafness is also to be found in Haller's writings. He mentions a surgeon who was in the habit of recommending the inspiration of hydromel-vapours with benefit. Somewhat later, in 1792, Herpold of Copenhagen proposed the substitution of common air for the various injections in use at the period, and he would appear to have met with a surprising degree of success.

It is an unquestionable fact that the injection of air promptly deobstructs the Eustachian passages and the drum, when these cavities are filled with inspissated mucus. This secretion adheres to the fenestræ and ossicula, interferes with the regular performance of their functions, causes hardness of hearing and tinnitus, and if from its viscosity the internal orifice of the tube becomes agglutinated, entire deafness must promptly follow. In cases of this kind it must be acknowledged that a small quantity of air, cautiously injected, will break through the thickened but yet liquid secretion, divide the mass, and separating its particles, at once restore the freedom of the passage, and the temporarily interrupted action of the organs.

The patient in such cases rapidly, in general instantaneously, recovers his hearing, in the same manner as the perception of light is at once re-established in the blind after the removal of cataract.

These singularly fortunate cases are, however, unfrequent, at least as far as the ear is concerned; the surgeon has more usually to deal with organic causes which, by slow operation, have destroyed hearing. The result cannot therefore be expected to have always the same characters of promptness and decision.

Chronic inflammation of the middle ear and of the Eustachian tube is one of the most common and obstinate of the diseases which occur in practice, and in this affection the mucous membrane is always more or less thickened.

Itard was the first who described the disease with the care it deserves, and he displayed his usual acumen in the delineation. He soon, however, discovered that in this instance the chronic morbid changes of the mucous membranes did not yield to the injection of water, and still less to the air-douche; but that sulphurous douches were beneficial, and also resinous or aromatic injections, or even vapours of ether when a nervous condition distinctly co-existed.

Such was the state of the question when Marc-d'Espine pub-

lished his researches on diseases of the ear, and again demonstrated the utility of the injection of solutions appropriate to the peculiarities of each case. Thus the diluted solution of potash, of nuxvomica, strychnia, and veratria were found unquestionably beneficial in several obstinate and predetermined morbid conditions.

"I have, myself," says M. Triquet, "recorded many instances illustrative of their efficacy.

"Daily experience has since confirmed these results in the most positive manner.

"Here lies the entire secret of the treatment. To attempt to remove the manifold causes of deafness by one procedure (such as the air-douche, for instance), is a system which can lead to no result but disappointment, and must eventually bring medicine into discredit. It is only by careful examination and accurate diagnosis of the disease the surgeon has to deal with, that he can hope to institute measures of treatment calculated to do good, in those cases at least which are not beyond the reach of medical art, and are yet susceptible of improvement or even of recovery.

"I may add, in conclusion, that very few diseases of the ear are entirely local.

"Gout, rheumatism, syphilis, and, above all, scrofula, perpetually baffle the most ingenious and well-directed efforts of the surgeon who resorts only to local measures. These important complications must, therefore, always be borne in mind, and I may say that in the course of my personal experience I have met with many instances of deafness which yielded to an appropriate and persevering general medication.

"Certain mineral waters will also be found extremely beneficial in peculiar cases."

ART. 154.—*Difficulties and Dangers attending Catheterism of the Eustachian Tube.*

By M. TRIQUET.

(*Gazette des Hôpitaux*, Mai 20, 1862, and *British Medical Journal*, August 2, 1862.)

In a recent article M. Triquet describes the principal difficulties attending catheterism of the Eustachian tube, and the accidents to which it may give rise.

Difficulty may arise on the part of the patient from extreme timidity, or from indocility in children; and both these may necessitate the use of chloroform. Excessive narrowness of the nasal fossa sometimes requires the use of a sound of small calibre and but slightly curved, which in such cases must be introduced gently under the lower turbinated bone, with the point directed towards the external wall of the fossa. Sometimes the narrowness is so great that the catheter, on reaching the middle of the nasal fossa, is arrested, and as it were grasped between the septum and the turbinate bone or between the turbinate bone and the upper jaw. If this be found to occur, and the point of the instrument, being in the

proper direction, cannot advance, it must be withdrawn, and again introduced after the patient has been allowed a few minutes' rest.

Difficulties may also arise from the configuration of the inferior nasal fossa. Extreme narrowness may be caused by chronic inflammatory thickening of the mucous membrane; by polypi or fleshy vegetations; by hypertrophy of the lower turbinate bone, or by greater or less unnatural elongation of the bone, with a faulty direction of the curve; by deviation of the septum of the nasal fossæ; by exostosis from the ascending process of the superior maxillary bone, or from the lower turbinate bone. Extreme sensibility of the pituitary membrane and the pain produced by the least touch also constitute a serious difficulty.

Difficulties may also arise in the introduction of the catheter, from not choosing a proper mode of operating, from using a too large or too curved instrument, or from giving it a wrong direction. M. Triquet introduces the instrument directly into the inferior meatus, with the end resting against the external wall. If it is gently carried on in this direction, the point of the instrument must infallibly reach the orifice of the Eustachian tube, which lies immediately behind the inferior meatus.

The accidents arising from the operation may be local or general.

The local accidents are: 1. Laceration of the inferior part of the nasal canal. This is not of much importance; it causes only slight pain and one or two drops of blood. 2. Extraordinary sensibility of the pituitary membrane may render the contact of the catheter so painful as to cause even the most courageous patient to cry out. In some persons, the contact of the sound with the pituitary membrane produces sneezing. 3. Another result is excessive lachrymation. More or less lachrymation very often follows the first introduction of a sound into the nasal fossæ. Sometimes the tears appear at the inner angle of the eye; but in lymphatic children, in nervous females, and even in impressionable men, the catheter scarcely touches the mucous membrane before the conjunctiva of the same side becomes rapidly ingested, the eye becomes moist and is turned upwards, and tears flow in abundance. These phenomena are not attended with pain, and generally pass off in a few seconds. Nevertheless, the possibility of their occurrence should suggest great caution in employing catheterism of the Eustachian tube in persons subject to disease of the eye. 4. A few drops of blood often flow during the operation, probably from the Schneiderian membrane being grazed or lacerated by the end of the instrument. But in subjects in whom, as the results of repeated attacks of coryza, the mucous membrane is red and inflated, and, as it were, studded with papillæ full of blood, the simple contact of the instrument may give rise to a true epistaxis; which may always be promptly arrested by the inspiration of a little cold water. 5. The operation may be disturbed by a nervous cough; but this is not of much importance. 6. As a result of simple or granular chronic pharyngitis, or of repeated quinsy, the tonsils may have remained hypertrophied, and it is not uncommon to meet with a spasmodic contraction of the pavilion of the Eustachian tube, when the

catheter is about to enter the orifice. In nervous subjects, as soon as the catheter touches the pituitary membrane, the velum palati is convulsively drawn upwards. During these violent contractions, whatever be the cause, the peristaphyline muscles, inserted near the mouth of the Eustachian tube, completely effuse the opening, so that an instrument cannot pass it without effort. If this spasmodic contraction occurs only at the moment when the catheter enters the tube, the point is expelled and falls into the pharynx, and the operation must be repeated. 7. If the surgeon employ too much force to overcome the contraction of the muscles, the mucous membrane may be torn, so as to give rise to the production of emphysema at the first attempt at deglutition or at inspiration. If the patient make a sudden movement of deglutition, or if the surgeon wish to blow in a little air for the purpose of exploring the tube, the patient falls as if struck by lightning; he raises his hand to his neck; the eye is haggard, the face congested, the mouth open, and the voice lost. The symptoms resemble those of œdema of the glottis in its last stage. On forcibly drawing down the tongue with the finger, there is perceived to be considerable emphysema, raising the whole of the mucous membrane of the pharynx and even invading the larynx, especially the aryæno-epiglottic folds. It is requisite only to tear with the nail of the finger which holds down the tongue one of the emphysematous projections of the mucous membrane; the air escapes and the patient recovers. M. Triquet states that death has sometimes occurred from this cause in the practice of London surgeons. 8. Rupture of the membrana tympani, according to M. Triquet, is liable to be produced when air is pumped into the Eustachian tube by means of Kramer's apparatus; and it may occur even when simple insufflation with an india-rubber bag is employed. Chronic inflammation of the membrane may predispose to this accident. 9. If too frequently repeated, catheterism of the Eustachian tube irritates the mucous membrane, and may give rise to traumatic inflammation. But sometimes even the introduction of a small catheter may give rise to a painful inflammation, which may extend to the cavity of the tympanum.

The general accidents that may follow catheterism of the Eustachian tube are: rigors and fever; facial neuralgia; obstinate headache; and an increase of the deafness, or of the noises in the ears, for the relief of which the operation has been undertaken. Suspension of the treatment is generally sufficient to arrest these accidents.

ART. 155.—*On the Treatment of Ear-Ache.*

By Mr. —.

(*British American Medical Journal*, Sept. 1862.)

The following short quotation is taken from some "Journal of Materia Medica." No further particulars are given, not even the writer's name:—"In numerous cases of ear-ache I have used the vapour of chloroform with perfect success. I take a common

tobacco-pipe, place a wad of cotton in the bowl, then drop eight or ten drops of chloroform upon it, and cover with another wad of cotton; place the stem to the affected ear, then blow into the bowl; the chloroform vapour is carried into the ear, and the pain almost instantly ceases."

ART. 156.—*Necrosis and Extrusion of the Vestibule and Cochlea during Life.*

By Mr. TOYNBEE.

(*Proceedings of the Royal Medico-Chirurgical Society, May 27, 1862.*)

After referring to the frequent occurrence of caries in the petrous bone, and to the infrequent occurrence of necrosis, the author proceeds to give, from the experience of others and of himself, the particulars of six cases of necrosis of the petrous bone. In two of the cases related, the vestibule and cochlea were thrown out in one mass during the lives of the patients; in two cases the cochlea only was extruded; in the other cases the patients died from the effects of necrosis of the petrous bone, and the particulars of the dissections were detailed. The author enters at some length into the details of one of the cases which recently occurred to him, where the necrosed cochlea came away during the life of the patient, and in which the ear, though deprived of a cochlea, still retained a certain amount of hearing power. In conclusion, the author offers some observations on the treatment of diseases attended by discharge from the ear, and which are liable to terminate in caries or necrosis of the petrous bone. It points out the desirability of not removing polypi from the ear in cases of diseased petrous bone.

ART. 157.—*Puncture in the Neck, with a Wound of the Internal Jugular Vein.*

By Mr. JOHN ADAMS, Surgeon to the London Hospital, &c.

(*Medical Times and Gazette, August 9, 1862.*)

CASE.—Mary Ann R., aged thirteen, servant, while cleaning the window of an upper room, was suddenly seized with giddiness (to which she was subject), and at once fell, passing through a skylight. She was picked up insensible, and remained so until she was brought to the hospital, on June 9, half an hour after the accident. Upon admission, she was pale and exsanguine, evidently suffering from the effects of the loss of blood. Upon examination by the house-surgeon (Mr. Gwynn), there was found a large, deep, irregular wound, situated in the right submaxillary space. No hæmorrhage was apparent at this time. The patient was then removed to the ward, and wet lint was applied to the wound. Mr. Adams's attention was shortly afterwards directed to the case; when, upon examination and removal of the clot, a gush of blood ensued, which was pronounced to come from the internal jugular vein. Mr. Curling, being in the hospital at the same time, his assistance was promptly obtained. He divided the skin upon Mr. Adams's finger, so that the bleeding vein might be secured, but the withdrawal of the finger was attended with an immense gush of blood. Temporary pressure was, therefore, applied with the finger. As the amount of

hæmorrhage was so great, and as it appeared impossible to reach the vein, Mr. Adams plugged the wound with pieces of sponge, and applied a compress. The patient was kept in the recumbent posture, with the head extended. Beef-tea and milk diet were prescribed, and a constant and careful watch was kept over the patient, in case of hæmorrhage.

June 10.—No further hæmorrhage has occurred. The patient complains of some pains in swallowing; an enema containing tinct. opii, mxx., and two ounces of beef-tea, were administered every four hours. Passed a good night; was fretful and uneasy during the day.

11th.—Seen by Mr. Adams. The bandage was removed, and spirit lotion was applied. The head is now able to be raised.

12th.—Strapping removed by Mr. Gwynn. Sponge is still left in the wound, from which there is some sanious discharge. The adjacent parts do not appear inflamed.

13th.—Improving. Extremely fretful. Linseed poultice to be applied to the wound.

14th.—Progressing favourably. Seen by Mr. Adams, who removed one piece of sponge. Pulse 80. Sleep natural.

18th.—Mr. Adams removed one piece of sponge, replacing another. Patient is now able to take solid food.

30th.—Patient has gone on without an unfavourable symptom, is now up, and is able to take the ordinary diet of the hospital. The wound has healed, with the exception of a small, healthy, granulating surface, about the size of a shilling, which requires only simple dressing.

Commenting upon this case, Mr. Adams says:—

“In the case before us, I acted according to the rule laid down, and although the bleeding had ceased entirely, from the pallid aspect and almost pulseless state of the patient, I was certain a large quantity of blood had been lost. In this idea I was confirmed by Mr. Gwynn, the house-surgeon. I therefore introduced my forefinger into the wound, which I found extended upwards, as far as the base of the skull, and on withdrawing it a large quantity of venous blood gushed out. I immediately re-introduced my finger and stopped the hæmorrhage. Of course I could not safely remove my finger, and was very glad to avail myself of the assistance of Mr. Curling, who, with a bistoury, enlarged the wound on my finger, so that I might, if possible, reach the vessel and tie it; but the wound was so high up that this was impossible—and as I was convinced that the internal jugular vein was the vessel wounded, I felt that no time was to be lost in seeking it. I therefore applied small pieces of sponge well pressed into the wound, and the hæmorrhage was arrested not to return; the sponge was confined by strapping and bandage. Now, you may say, is it right to put a ligature on the internal jugular vein? Certainly it is, unless you can stop the bleeding by any other means; and I candidly tell you, notwithstanding the fortunate issue of this case, if I could have found the wound in a convenient situation, I should have tied the vein. Perhaps it is better that I did not, as all hæmorrhage was arrested by pressure; but there is nothing so satisfactory in hæmorrhage as the ligature. I must tell you that the case was materially aided by position, for the head was made dependent backwards over a pillow, or, as the report says, completely extended, the patient being in a position as you may often see calves placed in as they are being

brought to market in carts. The risk of phlebitis, which often attends ligatures on veins, is avoided by the employment of pressure. As the case before us illustrates the subject of wounded veins, and hæmorrhage resulting from such wounds, I may be excused from dwelling somewhat on this subject generally, and on this case in particular. Serious and fatal hæmorrhage from veins is not of very frequent occurrence, and perhaps that is one reason why no great deal of attention is given to it. When a patient dies from hæmorrhage, the blood usually comes from some large artery; but it happens now and then that fatal bleeding arises from wounded or divided veins; thus in the operation of lithotomy in persons advanced in years, I have seen such serious bleeding from the plexus of veins which surround the prostate and neck of the bladder as almost to destroy the patient; so also in amputation of the thigh, if the vein is cut obliquely, most inconvenient hæmorrhage happens occasionally, and this more often occurs if no valves are near the divided end of the vein. When this happens, it is better to dissect the vein upwards and cut it across at once, or if the bleeding still goes on, either a compress of lint must be applied with a ligature attached so as to facilitate its removal, or the vein must be tied.

You will occasionally read in the public papers that a person has died suddenly in the street, or in a cab, or in a railway carriage, from the *bursting*, as it is termed, of a vein in the leg; this is no very uncommon occurrence. Frequently in the course of your experience at this hospital you will have cases brought in in consequence of hæmorrhage from an ulcer on the inside of the leg above the inner ankle. These are varicose ulcers, and I often take the liberty to ask the junior students what is to be done in a case of this nature? and the answer usually is, 'put a bandage on it, of course;' whilst the experienced surgeon says, place the patient on the back and raise the heel, and the bleeding will cease. Now this is the plan you are to pursue, and many lives will be saved by this simple process. It is a very great pity that the public, or, at any rate, that the police do not understand this, for by these simple means death may be frequently averted. Instead of putting on a bandage just clap your finger on the ulcerated vein, place the patient on the back, raise the heel, and remove the garter. Position in surgery is a great point, and in no case is its importance better exemplified than in this. In operations about the lower limbs, it is important to attend to this. In opening abscesses, or rather in dilating openings in the skin, you sometimes divide rather large veins, and they pour out a large quantity of blood, which the patient cannot afford to lose; raise the heel, and it ceases immediately. So also in the bleeding which comes from the prostatic plexus of veins; you had better try what elevating the pelvis will do, before you resort to the unpleasant proceeding of plugging the wound."

ART. 158.—*Exfoliation of Part of the Body of a Cervical Vertebra with the Fibro-Cartilage.*

By Mr. BICKERSTETH, Surgeon to the Royal Liverpool Infirmary.

(*Medical Times and Gazette*, June 21, 1862.)

CASE.—Joseph M., aged 22, a sailor, was admitted into the Liverpool Royal Infirmary, under the care of Mr. Bickersteth, on May 7, 1861. Eight months ago he was shot, a pistol-bullet entering his neck about two inches below the tip of his left ear. The injury was at once followed by paralysis of both arms, and considerable difficulty in swallowing. In a few hours the right arm recovered its power, but the left remained paralysed. He recovered, and in two months he was able to resume his work; the only inconvenience being the continual discharge from the wound. Two months ago, in Liverpool, he had to seek advice for severe pain in the interscapular region, and for numbness of the left arm. These symptoms were for the time relieved. On admission he was suffering from the symptoms just described, and he also complained of pain when moving the head, the pain being most severe when rotating, and consequently when walking about he seemed as if he had a "stiff neck." He had also some difficulty in swallowing. About two inches below the tip of the left ear was a wound, which with some difficulty would just admit the end of the little finger. A probe could be passed in the direction of the spine, and a rough surface was distinctly felt. Mr. Bickersteth enlarged the opening, so as to allow the finger to pass to the bottom of the sinus, and on doing so a distinct excavation in the side of one of the bodies of the cervical vertebrae (about the fifth or sixth) could be felt, in which some foreign body appeared to be lodged. As nothing loose could be detected, the wound was kept open with lint.

On May 26th he had very great pain when attempting to swallow; and on making an examination the fauces and adjacent parts were found to be in an intense state of inflammation, the left tonsil being covered with what appeared to be an exudation membrane. Diphtheritic sore-throat being just at that time rather common amongst the patients, it was considered that it was from this that he was suffering. He was ordered bark, chloric ether, and wine. The following day, during a paroxysm of coughing, he expectorated two small pieces of bone and a soft body, which was at first sight considered to be a piece of wadding; in shape it corresponded exactly to an intervertebral fibro-cartilage, and on further examination it was found to consist of dense fibrous tissues, being on either side coated with a very thin layer of osseous material, most apparent at the circumference and gradually diminishing towards the centre. The precise nature of this body was, if anything, more evident when dried, and left but little doubt whatever that it was an intervertebral fibro-cartilage from one of the lower cervical vertebrae. On examining the throat shortly afterwards, the inflammatory action had considerably abated, and a small opening could be seen about the upper and back part of the left tonsil, through which no doubt the foreign bodies had escaped.

He made a rapid recovery, and was discharged cured on June 15th, the wound in the neck having entirely closed. The movements of the neck were rather restricted, but he was entirely free from pain and quite able to follow his usual occupation.

ART. 159.—*Ossification of the Trachea, in consequence of a Tube having been permanently kept in after Tracheotomy.*

By Dr. FARGE.

(*Gazette Hebdomadaire*, Octobre 10, 1862.)

It has been recently remarked by M. Bouley that ossification of the trachea is a common result of tracheotomy followed by the permanent retention of the tube, in the horse. M. Farge now relates two cases, which show that the same thing may take place in the *adult* human subject. In both these cases it was necessary to retain the canula; in the first, œdema of the glottis had originally necessitated tracheotomy: the retention of the canula caused ossification of the tracheal rings in the neighbourhood of the wound. Nevertheless, when the tube was removed the wound healed: some months later, however, it was necessary to perform a second tracheotomy, the ossifications rendered the operation difficult, and the pressure of the canula upon the ossified cartilages caused their necrosis, and led to serious hæmorrhages. The second case was that of a lady, aged 36, who was in the third stage of phthisis, enceinte seven months, and in danger of suffocation from œdema glottidis. Tracheotomy was performed, and the tube retained in place, and the patient was thus enabled to survive her accouchement, and died about two months later: the canula was obliged to be kept in to the last. After death the borders of the incised cartilages were found to be ossified. M. Farge thinks that it is only in *adult or old* men or animals that ossification is likely to be produced in this way; but M. Bouley declares that it is quite as frequent in young horses as in old, under the same circumstances. M. Blache, however, declares that ossification is never observed in infants, even when they have worn the tube for two or three years.

ART. 160.—*A Tracheotomy-Tube dropped into the Left Bronchus.*

By Mr. SPENCE, Surgeon to the Royal Infirmary, Edinburgh.

(*Edinburgh Medical Journal*, August, 1862.)

CASE.—A man had had tracheotomy performed several years ago by Mr. Edwards, and had since worn a double tube. Yesterday, while riding on horseback, the rim of the tube, which had been gradually wearing, gave way, and it fell, as the man expressed it, "into his chest." The man went at once to Mr. Edwards' house, but as that gentleman was from home, his assistant put in another tube and sent him to the hospital, where he came under Mr. Spence's care. When Mr. Spence saw the patient he was breathing quite freely, and the sounds on auscultation were very much the same on the two sides of the chest. A probe was in the first instance passed down into the right bronchus (into which it was generally said that foreign bodies fell) but nothing was felt; it was then passed into the left bronchus, and the tube was at once felt. An attempt was then made to extract the tube without enlarging the wound, but was unsuccessful. Chloroform was then administered, the opening was enlarged by cutting through two or

three of the rings of the trachea, a pair of bent forceps was introduced, the tube was seized, drawn to the opening, and then extracted. Mr. Spence says, that, so far as he knew, this was the only case of the kind; but it should teach cutlers to make their tubes in two lateral halves and then join them together; for when, as at present, the shield was fastened to the tube, the soldering must in course of time give way.

(B) CONCERNING THE CHEST AND ABDOMEN.

ART. 161.—*Case of Ligature of the Sub-Clavian.*

By M. TORELLI.

(*Bolletino delle Scienze Med. di Bologna, and Schmidt's Jahrbücher*, No. 6, 1862.)

CASE.—A man, aged 26, received a wound in the axilla from a knife, which was directed upwards and forwards; he fainted from loss of blood, and the hæmorrhage spontaneously ceased. A bandage and compress were applied, and the case was carefully watched. All went well till the tenth day; but then there appeared in the site of the wound a diffuse aneurism, which by the next day had extended up to the acromion. Compression was applied by the tourniquet in the axilla, digitalis was administered, and the man was bled twice. The tumour continued to increase up to the twentieth day, the arm swelled, and the hand became numb; the bleedings were continued. On the twenty-fourth day signs of commencing mortification of the hand became apparent. The wound of the axilla was now a large, deep, irregular hole: the moment the lint compresses were removed, a jet of arterial blood took place: this was immediately arrested by compression of the subclavian, and accordingly M. Torelli proceeded to ligature that vessel without loss of time. The gangrene of the hand soon began to limit itself, and on the 10th day after the operation the pulse in the radial artery could again be felt. A week later, the ligature fell from the subclavian, and a week after this the mortified parts of the hand, viz., the index finger and part of the little finger, were amputated. The wound in the axilla gradually closed up, and, with the exception of a slight hæmorrhage from the back of the ligature, which was immediately checked by styptic compresses, no further accident occurred. The patient left the hospital, cured, about five months after the accident.

ART. 162.—*On Operation in Scirrhus Cancer of the Breast.*

By Mr. PAGET, Surgeon to St. Bartholomew's Hospital.

(*Medical Times and Gazette*, September 27, 1862.)

Some recommend operation in nearly every case, and some will operate in none. Both have some truth in their arguments, both have much that is good in their practice, but it is possible to obtain the good of both sides without adopting the too general rule of either. There can be no doubt that the greatest measure of good may be done by making a careful selection of cases fit for operation, and rejecting all the rest.

It is necessary to consider first what are the objections to the operation, and to—

1. The excision of the breast. They are chiefly, and almost

alone, that the patient may die in consequence of it. Mr. Paget believes that in any large number of cases, even of those selected with some care, it may be feared that one patient in every ten will thus die, of pyæmia, or erysipelas, or tetanus, or secondary hæmorrhage, or some calamity following the operation. And this must be no trivial consideration, for in every such case the operation destroys in a week or two a life which, but for it, might have lasted as many years.

Nor, according to some, is this all: for it is said that when the disease returns after operation, it makes so much more rapid progress than if it had been left alone, that the operation shortens the lives of even those whom it does not kill outright. It cannot, perhaps, be denied that this may be true of some cases in the selection of which no judgment is exercised, but, on the whole, taking the results of some hundreds of cases, it is certain that the average duration of life in those operated on is not less than in those in whom the disease runs its course: rather, in well-selected cases it will be found always greater. In a recent tabulation of hospital and private cases, 85 cases operated on lived an average of 55·6 months, and 62 cases not operated on lived an average of 43 months. And some such proportion as this will probably be always found.

It has been objected, too, that the recurrent disease, even if not more rapidly fatal than the uninterrupted disease would be, is more painful. But this is certainly not generally true. In very many cases—in the large majority—the recurrent disease is much less severe than the continued disease would, in the same time, have become; it is only in a very few that we can fairly expect it to be worse. It can scarcely be urged that the pain of the operation or of its consequences is an objection; for with chloroform the pain of the one is null, and with simple dressing that of the other is really trivial. It may, therefore, be safely held that the only material objection (but it is a very serious one) to the operation is, that a patient runs a risk of one in ten dying from it; in other words, it is only about nine to one that she will recover from the effects of the operation.

What, then, does the operation offer that can make it advisable for a patient to incur this risk of dying? Does it offer to any one a reasonable hope of an indefinite prolongation of life, and freedom from the same disease? No: the recurrence of cancer of the breast after operation may be held to be as certain as anything in surgery. The question is thus narrowed; we must in every case expect the recurrence of disease; and this is likely to occur at such a time after the operation that, speaking generally, and on the average, the patient will not rarely die of cancer nearly as soon after the operation as if the disease had been left to its own course.

Can it, therefore, be reasonable to submit a patient to the risk of dying within a month, perhaps in a week, for the sake of that interval of health which will or may exist between the operation and the recurrence of the disease, and for a good probability of adding a year to life, and of having a less severe disease? The

answer must depend, chiefly, on the probable length of this interval before the recurrence. The average is little more than thirteen months; more than one-half return within twelve months; about two-fifths return within six months. Is this average worth the average risk of life? Consider, when no operation is performed, the pain and anxiety,—the pain likely to increase daily,—the misery of waking every day to the consciousness of an incurable disease; the sometimes loathsomeness; the restlessness for cure;—cure, such as there are never wanting dishonest men to promise. The average expectation of such relief seems worth the average risk, but not more. Look well, therefore, to the general condition of patients before deciding.

The average interval between the operation and the return of disease is, as has been said, about thirteen to fourteen months; but the extremes, between which the average is drawn, are very wide apart. In some cases the return may be within three months; in some not for ten, twelve, or more years.

It is, therefore, of great importance to be able to decide in what case the risk of life is greater, and in what the probability of speedy return of the disease is greater, than the average.

For the first, there are no other rules for cancer than for other cases requiring large operations. These are some of the “doubly hazardous:”—The old, after 60; the very large-breasted; the fat and plethoric; the cachectic; the overfed on animal food; the drunkard; the gouty; the habitually bronchitic; the albuminuric; the very dejected, not merely timid; and, in short, those with any organic disease of internal organs; and, after middle age, these increase very much in their proportion.

And for the probabilities of rapid recurrence, these are “bad cases.” Acute cancers—*i.e.*, all that have been rapid in progress; for those which increase very quickly before the operation are certain to recur quickly after it. This, however, may be no sufficient objection, for great pain may often be saved by its performance. Mr. Paget said that he remembers such a case in a lady, whose breast he removed when she was five months advanced in pregnancy. She recovered well from the operation, and the benefit procured by its performance was very great; she went to her full term, bore her child, and was able to suckle it for a year before she died, with her most anxious wish fulfilled in comparative comfort.

Another condition unfavourable to operation is a brawny skin with firm œdema, and wide open hair-follicles, or wide adhesion of skin; so is that in which the skin is extensively cancerous, or where there are little scattered tubercles of cancer in the glands and skin; or where there is considerable affection of the lymph-glands in the axilla, especially *numerous* diseased glands. A moderate amount, however, of lymphatic diseases is no serious obstacle to an operation. But supra-clavicular disease should be an almost absolute bar against it.

Mr. Paget here adverts to the best manner of detecting cancerous lymphatic disease in this situation, and says that in cases where it is

impossible to make out satisfactorily, by touch, the presence of enlarged glands, a difference of outline may be often seen by bringing the eyes to the same level with the part, and comparing the two sides; an uplifting of the integuments being often caused by the presence of swollen glands too deep or small to be felt.

Cases in which cancer attacks the upper half of the breast are generally bad; and those in which the lower part of the gland is affected are among the best. Cancer simultaneously affecting both breasts is seldom or never to be operated on, for the risk is greater, and the advantage not greater.

There are, again, certain cases in which an operation is needless: such are the very chronic—where the breast is small, shrivelled, knotty, and sunk down on the pectoral muscle. Patients with disease of this kind will live many years probably, with no increase of trouble and with but little inconvenience.

Mr. Paget concludes this part of the subject by summing up the advantages on each side, and says that the statements which he has made were taken from general averages, and that from such alone could any general conclusions be drawn. To deal with single cases is but a sort of surgical gambling. One man will tell of a case where no operation was performed and the patient lived for twenty years, and another will tell of a life prolonged for almost the same time after operation; each statement quite true, but neither of them of any useful application. To reckon from such cases is mere gambling; and, as in gambling of other kinds, the best luck at first brings the worst grief at last.

ART. 163.—*On the Employment of Compression in Tumours of the Breast.*

By M. BROCA.

(*Bulletin de Thérapeutique*, Nos. 4, 5, and 6, 1862, and *Medico-Chirurgical Review*, July, 1862.)

In this paper M. Broca gives an account of the advantages which he has derived from the employment of compression in *adenoid* and *irritable tumours* of the breast. Very large and very soft adenoid tumours are unsuited to this means, both because they often exhibit a tendency to ulcerate, and their usually irregular surface renders the application of uniform compression difficult. For the effectual employment of compression much attention and assiduity is required upon the part of the surgeon, and some resignation on that of the patient. Accustomed to the use of stays, women for the most part breathe by means of the upper part of the chest, and at first they suffer much from any constriction which prevents its dilatation. The best way is to commence the pressure somewhat gradually, though still effectually, even from the first. M. Broca applies it by binding on plates of agaric, strips of adhesive plaster making, he thinks, less uniform compression, and being liable to induce irritation. The bandages securing the agaric, and others covering these, must vary somewhat in their disposition, according

to the stoutness of the woman; but it is essential, as they may have to remain on even for weeks, that they should be well secured to the agaric and to each other by means of pins. As many as fifty pins are sometimes required, the bandage thus acquiring great solidity and not slipping.

In treating of *adenoid tumours of the breast complicated with neuralgia* M. Broca observes that, in fact, any of the varieties of tumours of this organ may be thus complicated, but he has never met with an example of A. Cooper's irritable breast occurring independently of any tumour. Most of the mammary neuralgias are connected with tumours, which are the consequence of various forms of hypertrophy, and especially adenoid tumours. M. Broca does not agree with Velpeau in the slight value he attaches to the employment of compression in those irritable tumours. He regards this treatment as the most rational, seeing its great success in the simple adenoid, the neuralgia disappearing when, by its aid, the atrophy of the tumour has been secured. Of course it will not always succeed, for there are cases of simple adenoid which resist its influence, and all irritable tumours are not adenoid; but judging from the four cases which have occurred in his own practice, M. Broca regards it as the most efficacious of all remedies yet essayed, with the exception of amputation—a humiliating resource. M. Broca's experience having been thus far confined to adenoid tumours, he is not prepared to say to what extent compression may prove advantageous in other forms of irritable tumours, although he anticipates that the same advantages may be derived from those of them which are dependent on any form of hypertrophy and chronic inflammation.

ART. 164.—*Case of Rupture of the Pectoralis Major.*

By M. LETENNEUR.

(*Gazette des Hôpitaux*, No 14, and *Medical Times and Gazette*, August 9, 1862.)

M. Letenneur relates this case in consequence of the rarity of the accident, and as a proof of the rapidity with which recovery may take place after subcutaneous rupture of muscle.

CASE.—A carter, 30 years of age, and of good muscular development, while endeavouring to stop his horse when in rapid motion, fell down on his back, the wheel of the cart passing over his left shoulder. He complained of severe pain in the shoulder and along the left side of the chest, and a tumefaction was observed in the mammary region, unaccompanied by any contusion, some slight scratches alone indicating the passage of the wheel. The point of the shoulder projected much, but there was neither fracture nor dislocation. Between the shoulder and the tumefied mammary region a very marked depression existed, and at this point the anterior wall of the axilla was, throughout its entire length, formed only of the skin. On feeling this anterior wall no traces of the pectoralis major could be perceived. Behind, the muscles remained intact. Abduction of the arm could be performed, although with difficulty, but adduction was impossible. When the patient brought the arm near the trunk, the mammary tumour increased, and an undulatory *frémissement* was perceived;

and the hand placed on the tumour felt it harden for an instant and then subside,—the pectoralis contracting, in fact, on its internal insertions being approximated. About four centimètres of the humeral portion of the muscles could be perceived. The arm was kept near the trunk by means of a sling and bandage. On the third day the arm, shoulder, and chest exhibited abundant ecchymoses, and on the seventh day the interval between the separate portion of the muscles had become filled by a hard, voluminous, rounded body. This gradually assumed a more equable shape, and on the fifteenth day, when the patient was discharged, he had recovered all the movements of the arm, although unable as yet to perform laborious actions with it.

ART. 165.—*Fracture of a Rib produced by a Sneeze.*

By M. D. F. CASTELLA, of Fribourg.

(*Gazette des Hôpitaux*, and *Glasgow Medical Journal*, April, 1862.)

CASE.—Ulrich B., of Suniswald (Canton de Berne), is a public-house keeper, 39 years of age, with a strong, robust constitution, although he has suffered during his life from various maladies, apparently of a strumous nature. On the 6th November, 1861, he was seated in his bar with several customers, one of whom offered him a pinch of snuff, which he accepted. Not being in the habit of snuffing, he was at once seized with a fit of sneezing, which he attempted to restrain by shutting the mouth and forcibly dilating the chest. In this, however, he failed, and a violent expiration having succeeded to the excessive and prolonged dilatation of the thorax, he felt at the same moment in the left hypochondriac region a sudden, sharp pain, accompanied by a very distinct crack, difficulty of respiration, and a very painful cough. I was at once summoned.

I discovered in the middle of the body of the ninth rib on the left side a very evident crepitation, and an oblique solution of continuity. It was then a fracture of the second false rib on the left side. I was able to confirm this diagnosis, as the same symptom persisted during four or five days, with slight tumefaction of the surrounding soft parts. No complication in the part of the pleura or lung supervened.

I am not aware that violent sneezing has been cited by authors as a cause of fracture of the rib. If this case is not unique, the fact must have been but rarely observed. It is interesting in a surgical point of view, and it is important in legal medicine to know that rapid and strong contraction of the diaphragm, preceded by an excessive and prolonged extension of that muscle, may occasion the fracture of a rib.

ART. 166.—*On the Treatment of Lateral Curvature of the Spine.*

By Mr. WM. ADAMS, Surgeon to the Royal Orthopædic Hospital, &c.

(*Medical Times and Gazette*, May 24 and June 27, 1862.)

Mr. Adams divides these cases into three classes: 1. Cases essentially of constitutional origin, or in which the constitutional largely predominate over the local causes; 2. Cases depending upon constitutional and local causes in about equal degree; and 3. Cases essentially depending upon local causes, acting mechanically so as

to disturb the equilibrium of the spinal column. He makes many excellent remarks under each of these heads, entering fully into the details which the practical man best knows how to appreciate. Speaking of the treatment of the cases included in his second class, he says:—

“Every effort must be made to strengthen and improve the general health of the patient, and for this purpose the exhibition of cod-liver oil, iron and lime, as previously mentioned, together with nutritious diet with wine or beer—amounting, in fact, to what is called *high living*, where this can be borne—change of air, either to the country or the sea-side, and other means, will generally be advisable,—but *local treatment*, having direct reference to the spinal curvature, is at least of equal importance with the constitutional treatment. With this view I believe these cases require to be treated by partial recumbency, gymnastic exercises, and mechanical support, combined in various proportions, according to the severity and the situation of the curvature, and the general condition of the patient as to muscular debility or otherwise.

“Exact rules as to the combination of these different methods of treatment can hardly be laid down, so various are conditions presented by these cases; but, speaking generally, I recommend the recumbent position in proportion as the spinal curvature predominates in the lumbar region, because in this region the curvature is less amenable either to mechanical or gymnastic treatment; and also because the structural changes which take place at an early period,—in fact, as soon as the spinal curvature has actually formed in the intervertebral cartilages and the oblique and articulating processes,—can only be arrested and the damage repaired by the reparative powers of nature during the period of active growth, when all the mechanical conditions tending either to the production or increase of the spinal curvature are effectually removed: and I know of no means by which this can be accomplished except by the recumbent position. Theoretically, therefore, complete recumbency—by which I mean lying down for a period of from one to two or three years, would be the best treatment in these cases; and practically, no doubt, it has often been found to answer exceedingly well. The advocates of such a system will no doubt be able to point to numerous cases in which the treatment has been perfectly successful; but all practitioners know that by many patients complete recumbency for a lengthened period cannot be borne, and that under its influence the general health gives way. A compromise must therefore be made, and there can be no doubt that, with the assistance of the improved spinal instruments now in use, the patient may be allowed to take a fair amount of walking exercise, while the spine is so effectually supported that the unequal distribution of the superincumbent weight—the direct cause of the increase of the curvature—is to a great extent prevented.

“With regard to the combination of gymnastics with partial recumbency and mechanical support in the treatment of these cases, in which the spinal curvature predominates in the lumbar region, I believe the gymnastics should be conducted as much as possible

whilst the patient is in the horizontal position, and this can be accomplished by the use of the exercising-plane which I have already described. The patient may use this exercising-plane for a quarter or half an hour three times a day; it is also frequently employed as a reclining board, so that a double object is effected.

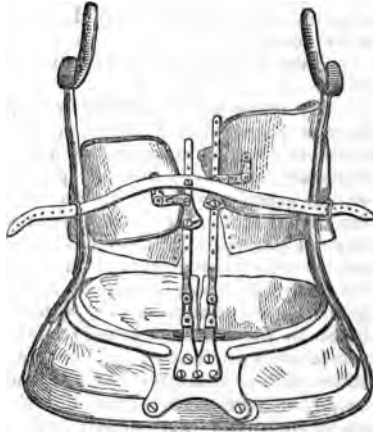
"Then, with regard to *gymnastic exercises, as a general principle of treatment* in the class of cases we are now considering,—viz. those which occur in growing girls between the ages of twelve and sixteen years,—I recommend their adoption, in proportion to the evidence of general muscular debility, in the cases which I have described as *weak spines*, or weak spines passing into the condition of confirmed curvature: and when the spine is disposed to curve in the dorsal and upper lumbar regions, and assume the form which I have described as that of a long single curve. If these cases are submitted to treatment at a sufficiently early period, gymnastics may be chiefly, if not entirely, relied upon; but, as I regard gymnastics as a preventive rather than curative method of treatment, I always combine them with partial recumbency, *i.e.*, lying down in the reclining-chair four or six hours a-day, which I consider to be a direct curative means. If the case, instead of being one of *weak spine*, or weak spine passing into confirmed curvature, be one of confirmed curvature, and in which some of the anatomical deviations which I have already described undoubtedly exist, such as the posterior projection of the angles of the ribs in the dorsal region, or of the transverse processes in the lumbar region, on one side, with a corresponding depression of the other, with or without lateral deviation of the apices of the spinous processes, &c., then we must combine *mechanical support by means of a spinal instrument*.

The extent to which we can rely upon *mechanical treatment* as curative, when carried out by means of spinal instruments capable of giving a firm support to the spine, as well as exerting a certain amount of active force or pressure which can be regulated from time to time by the surgeon, and applied with more or less accuracy to the portion of the spinal column which is the precise seat of the curvature, must vary very much in different cases, and depend upon the situation, form, and extent of the curvature, as well as the length of time it has existed; but, speaking generally, mechanical treatment may be most certainly relied upon when the curvature predominates either in the middle, or in the middle and lower portions, of the dorsal region, where we can most directly act upon the spinal column through the medium of the ribs.

A great variety of spinal instruments, constructed upon very different principles, have been and are still employed by various authorities on spinal curvature; but those which I have found most efficient in the cases we are now considering are of two forms: one, a modification of the England spinal support, adapted for slight cases in young and delicate girls; and the other, a much stronger instrument, with more complicated mechanism, used in the more severe cases, and for stronger girls above fourteen years of age.

The light instrument, which is a modification of the Eagland spinal support, is represented in Fig. 1. The pelvic belt is strengthened by being made to clasp in front, and the arm-pieces attached to the crutches are raised in front to resist the posterior pressure. One or two steel plates are attached to separate levers which move by a lateral cog-wheel action connected with the pelvic belt, and these levers are also connected with the crutches by means of a transverse leather strap.

Fig. 1.



The stronger instrument, which I always speak of as my *rotation-plate instrument*, is represented in Fig. 2. The pelvic belt is of a circular form, and made of strong flat steel; the crutches

are proportionably stout, and move in an antero-posterior direction by cog-wheels connected with the pelvic belt. One or two lateral steel plates are attached to separate levers, the dorsal plate being made to move in

The Eagland Spinal Instrument, with the addition of Rotation-plates.

several directions for the purpose of accurate adaptation, and especially having a horizontal circular cog-wheel, by means of which it can be moved in the direction of horizontal rotation, the force being directed against the ribs in the same plane but in the opposite direction to that in which the ribs have deviated from their normal position, in consequence of the rotation-movement of the bodies of the vertebræ, which, I believe, always takes place in cases of confirmed lateral curvature, and which I have especially described as "*the internal curvature*," as distinguished from "*the external curvature*," or lateral deviation of the apices of the spinous processes. The lumbar plate does not require the same mechanism, as the force exerted by it cannot usefully be directed against the lower ribs. The

Fig. 2.



Spinal Instrument with Rotation-plates.

levers are moveable in the antero-posterior, as well as in the lateral direction, by two cog-wheels connected with the pelvic belt, and they are also connected with the crutches by means of leather straps. This instrument requires careful and frequent adjustment by the surgeon. As a general rule, I do not recommend the instrument to be worn at night, though in some cases, accompanied with more than ordinary spinal pain, advantage is occasionally derived from so doing.

"The cases included in the class we are now considering,—viz., those which generally occur in growing girls between the ages of twelve and sixteen, and depend upon constitutional and local causes in about equal degrees,—are generally the most curable we meet with in practice, and I have no hesitation in expressing my conviction that if they are submitted to treatment before any very obvious external deformity has occurred, they are generally curable within one or two years; though in some instances, especially if an hereditary tendency to spinal curvature exists, and the girl is of feeble constitutional power, a longer period may be required; whilst in the more advanced stages the curvature can certainly be arrested and diminished by treatment continued over four or five years, and in some instances it is necessary that the spinal instrument should be worn till the growth of the patient is complete,—say up to twenty years of age,—and the general health and strength are sufficiently established to remove our fears of increase of the spinal curvature."

ART. 167.—*On the Radical Cure of Exomphalos in the Adult.*

By DR. PATRICK H. WATSON, Assistant-Surgeon to the
Royal Infirmary, Edinburgh.

(*Edinburgh Medical Journal*, September, 1862.)

After describing the case of a woman, aged 35, who consulted him on account of a large reducible umbilical hernia, and after criticising several modes of treatment usually adopted in such cases, Dr. Watson says—"It occurred to me that by passing a wire backwards and forwards subintegumentally through the margin of the fibrous aperture, the parts might be drawn together, as the mouth of a bag or purse is by a string, so as to prevent all protrusion for the time, while such an amount of consolidation would occur as should effect the permanent occlusion of the opening.

"Accordingly, on the 20th of May, the patient having had her bowels freely evacuated, I reduced the hernial contents, and, keeping them reduced by introducing the fingers of the left hand into the large circular opening, I passed the point and shaft of a needle in a fixed handle armed with stout silver wire, three times backwards and forwards, subcutaneously, through the upper half of the tendinous circumference of the aperture. The point of the needle was then carried outwards through the skin, and the wire disengaged. Having then withdrawn the needle, it was again armed with the other extremity of the same wire, and introducing its point by the

first cutaneous puncture, it was passed three times backwards and forwards through the lower half of the circumference of the tendinous opening, and made to emerge through the same cutaneous puncture as the end of the wire which had been first passed. In this way the aperture was surrounded by a loop of wire, and its margin so picked up as to admit of its being firmly drawn together. The two ends were now drawn by an assistant across each other, when the aperture was felt to become more and more contracted, until the little finger was tightly constricted; with a little more traction this opening was felt to become entirely occluded. The ends of the wire were now crossed two or three times, so as to twist them together, and thus prevent the opening from becoming relaxed. The ends were farther crossed over a roller bandage, so as to admit of the wire being tightened, by twisting from day to day should this be requisite. To afford steady support a pad was placed over the site of the hernial aperture, and a flannel bandage carried round the abdomen.

"As the immediate result of the operation the sac became distended with serous fluid and masses of lymph. But these were speedily removed by absorption without the employment of any treatment. Slight suppuration, however, occurred along the course of the wire, where it emerged from the skin, and a limited abscess formed beneath the skin, but external to the tendinous surface; this was opened—after which the parts cicatrized. At the end of the first week the wire was daily twisted more and more, and on the tenth day after the operation the wire came away of its own accord. The loose integumental texture which enveloped the hernia gradually contracted until the surface became quite level, and a mere thimble-like projection indicated the portion of the tissues which had been spread out over the rupture. On the 20th of March, eighteen days after the operation, the parts were perfectly consolidated. After this the patient was up every day and walked about; and by the 20th of April was so perfectly strong and well as to be able to return to the country to resume her duties in the kitchen.

"With the exception of rare instances of congenital deficiency in the abdominal walls, permitting protrusion to recur in this situation, the greater number of cases of exomphalos in the child occur within a brief period after birth, and require no treatment, except support, to enable spontaneous contraction of the umbilical opening to effect a true radical cure. To attain this, however, satisfactorily and speedily, the nipple-shaped portion of cork which is usually recommended to be applied over the dilated opening so as to occupy it and prevent protrusion, should not be employed. For by its conical form it acts not merely as a means of repression, but also by its presence in the aperture prevents, or at all events delays, the occurrence of permanent and complete contraction and consolidation of the opening. The retentive pad should therefore consist of a smooth, well-padded, flat surface, of some firm material—such as sheet lead, tin, or bend leather, which can be retained in contact with the surface over the umbilicus, so that while it prevents the recurrence of any protrusion it may have no effect in interfering with the

process of spontaneous consolidation. In the adult, again, exomphalos is a rare affection. The protrusion usually takes place not through the umbilical opening, but through the tendinous textures, either above or below, on one side or the other of the navel. It is in most cases easily retained by means of a suitable belt or truss, but never spontaneously undergoes a cure by the use of those means.

"With reference to the employment of the radical cure in cases of hernia generally, I have always been of opinion that so long as retentive measures prove efficient in restraining the rupture, and there is no progressive increase in the dilatation of the aperture by which the protrusion escapes, there is no call for any operative interference to effect a radical cure—that, in fact, nothing better can be desired than a well-fitting truss. But where no retentive measures are sufficient, where the protrusion increases, where it threatens to give rise to serious results, and prevents the patient from following an avocation by means of which he gains his livelihood, it seems to me there is a great propriety in operative interference, if such interference can be shown to be competent to attain efficiently the object in view—that object manifestly being, not merely the temporary retention of the protrusion, but the complete consolidation of the aperture through which the hernia escapes—the radical cure, in fact, not of the result of the morbid change in the parts, but of the cause which permitted the displacement to occur. In the so-called radical cure of most hernial protrusions, as, for example, in the oblique inguinal ruptures by the methods proposed, the plugging of the canal, so as to support the parts and prevent the protrusion, is what is effected, and not the drawing together of the internal abdominal ridge, so as to preclude the occurrence of any future protrusion, which is what theoretically we should have desiderated. Hence it is that in most of these so-called radical cures the patient still requires to resort to the use of a truss, to prevent any protrusion from forming and displacing the plug of integument or subcutaneous cellular tissue which temporarily occupies the canal.

"It is in this respect, therefore, that the method of radical cure of exomphalos, which I have just detailed, differs from those others to which I have alluded. It acts not merely by repression, but by actual prevention; it does not only obstruct the escape of the hernia, but it obliterates the very doorway of escape, and restores the weakened, opened up, and dilated portion of the abdominal parietes to its normal condition.

"The peculiar anatomical arrangement of the parts in the oblique inguinal hernia and in femoral hernia, related as the mouth of the hernial sac is to vascular parts of great importance, renders it attended by too great a risk of inflicting serious mischief to admit of the application of this method to the treatment of cases of reducible hernial protrusion occupying those situations. It is so far fortunate, however, that in these situations a well-fitting truss, applied with ordinary attention, will generally suffice to support the parts, to keep the patient comfortable, and to relieve him of the risk of serious consequences which would accrue were the rupture left unsupported. In the case of the direct form of inguinal hernia, however, it is frequently found to be extremely difficult to retain the hernial

protrusion within the abdomen, for, in order to do so, a truss must be employed, which by its firm pressure galls the part and makes the patient very uneasy. In such cases, then, there seems to me to be nothing which should so absolutely interfere with the safety and success of the encircling of the fibrous textures constituting the mouth of the hernial sac in the manner already detailed, as to forbid its employment. The epigastric artery could alone come in the way, and might with moderate care be easily enough avoided, the finger being passed along with the integuments within the abdomen, so as to guide the point and passage of the needle.

"Having, however, had no occasion, since treating the case of exomphalos which I have detailed, and which led to the first employment of this method, to meet with any case of direct inguinal hernia which could not be retained by means of a well-fitting truss, I can only throw out these remarks with reference to the adoption of this plan in such cases, as a suggestion which, although it has no foundation in experience, may appear not unworthy of being tested in actual practice."

ART. 168.—*On Continued or Glover's Suture, in Wounds of the Abdomen and Intestines.*

By M. REYBARD, of Lyons.

(*Gazette Hebdomadaire de Médecine et Chirurgie*, September 18, 1862.)

In a communication to the Imperial Academy of Medicine at Paris M. Reybard strongly recommends the *continued* or *Glover's* suture in wounds of the abdomen and intestines.

M. Reybard begins the suture by securing one end of the thread by a knot, including a very minute portion of one of the lips of the wound, and sews up the whole track of the division by stitches placed as close to each other as possible. They are tightened in such a manner as to cause the thread to disappear altogether, and he cuts the extremity of the thread on a level with the wound. The suture is, after a very short interval, followed by plastic exudation, which causes adhesion of the intestine with the adjacent serous surface, and effectually protects the injured part. The threads fall away into the bowel in the course of ten days or a fortnight, the false membranes are gradually absorbed, and when cicatrisation has taken place, it would often be difficult to point out the precise situation occupied by the injury.

It would appear from M. Reybard's experiments that, whatever mode of suture he employed, nature effects the union by apposition of the lips of the wound.

The serous surfaces artificially placed in contact with each other by the surgeon remain but a short time in this position; the connecting adhesions disappear, and the edges of the wound at first protrude into the intestinal cavity, but soon return to their natural situation, and unite in a direct manner with each other.

Apposition of the lips of the division is therefore, according to M. Reybard, the natural and inevitable mode of cicatrisation; he, therefore, prefers the Glover's suture, the simplest of all the pro-

cedures recommended, and one which immediately effects the result which sooner or later must be produced.

The continued or Glover's suture is applicable, whether the breach in the intestine be small or the whole cylinder of the bowel be divided, and may therefore be considered an effective substitute for every kind of artificial invagination.

When the injured intestine protrudes through the external wound, the difficulties of reduction may be decreased by closing with a few ligatures a portion of the aperture in the abdominal wall, if its extent be too considerable. The perils of laborious reduction, and of the manipulation of the intestine, should not, however, be exaggerated. The author relates in illustration the history of a case of severe abdominal injury, in which the protruding intestine, wounded in two separate places, was reduced eight hours only after the accident, and with much effort and pressure; yet the patient recovered. M. Reybard then dwells on the effects of the contact of air with the peritoneum, which he does not consider to be so injurious as authors have asserted. The bowel, when exposed, and not strangulated, instead of becoming the seat of inflammation and gangrene, is soon protected by a sort of cicatrical sheath, continuous with the integument, which assumes, after a time, some of the characters of the latter. The gravity of traumatic peritonitis is neither due to the contact of air or even to the violence of the inflammatory action, but solely to the passage of the gaseous or liquid contents of the intestine into the abdominal cavity. Peritonitis caused by the mere contact of air with the serous membrane materially differs in its progress, symptoms, and morbid secretions, from peritoneal inflammation of idiopathic origin, or consequent on intestinal incarceration. These remarks, together with the innocuous character of the suture, sufficiently justify, in the author's opinion, the surgical treatment he recommends for wounds for which practitioners in general prescribe only internal remedies, of no avail for the preservation of life. One of the arguments which he conceives to be most favourable to the course he advocates, is that abdominal wounds usually occur in young and vigorous individuals on the field of battle, or after duels or affrays. In general, therefore, the age and constitution of the subjects will be found such as promote in the highest degree the success of all surgical procedures, and, *à fortiori*, of a form of surgical interposition not liable in any way to aggravate the perils of the injuries it is intended to remedy.

ART. 169.—*On the Treatment of Cut-and-Thrust Wounds of the Intestinal Canal.*

By Dr. B. WEBER.

(*Philadelphia Medical and Surgical Reporter*; and *Dublin Medical Press*, September 3, 1862.)

"Privately," says Dr. Weber, "as well as in public institutions, experiments have been made on dogs, sheep, calves, hogs, &c., to ascertain the condition of the intestinal canal after receiving a cut-or-thrust wound. In no case, except where the canal is transversely

and entirely severed, a separation of the edges of the cut takes place immediately after the lesion. It is all the same whether the wound be longitudinal, transverse, or oblique, they all close themselves by the combined action of the longitudinal, transversal, or spiral muscles of the intestine, and adhere for twenty-four to thirty-six hours, and even longer, after the lesion, while in the meantime the edges of the wound form a lip-shaped swelling. Inflammation here ensues, with exudation of plastic lymph from the serous membrane of the intestinal canal. This plasma agglutinates the edges of the wound and unites them with the adjacent portion of the intestine not wounded, and which, like a plaster, overlaps the neighbouring wound. Not earlier than on the second or third day in the proportion as the increased inflammation forms into supuration or mortification, the separation of the wounded edges and the fatal effusion of the contents of the intestinal canal into the abdominal cavity takes place. It is this above described condition of the intestinal canal and the successive appearance of pathological phenomena which the surgeon has to make use of for his healing plan, and which give him the indication for the mode of treatment. His first object must be to prolong as much as possible this primitive subinflammatory condition, during which exudation of coagulable lymph only prevails, and to make it continue until the lymph has organized itself and a firm adhesion of the edges of the wound has taken place, which seldom takes more than from eight to twelve days. To be sure of success, it is necessary that the physician, as soon as possible after the lesion, gets the patient under his charge, while it is still possible to confine the inflammation of the wound and prevent its farther development, and to keep it and have it remain in such a state as is favouring organizing plasticity, and which operates against a farther development of inflammation. To attain this, according to my experience, we have to resort to the early application of frigidity, which is to be continued in proportion to the intensity and continuance of inflammation, and than which no agent in chirurgical therapeutics is more commendable. The antiphlogistic action may be explained by the circumstance that the vessels of the inflamed part contract, and thus the flow of blood to the irritated and inflamed portion is kept off and the developing heat absorbed. Whenever a physician is called to a case of wound in the abdomen, first of all he has, according to well-known rules, to replace the intestines which may protrude, and to bring the wound of the intestinal canal as much as possible into a corresponding situation with the external wound. If the intestinal canal is wounded, without any intestines protruding, but from the depth the weapon penetrated, from the odour attached to it and other circumstances, a lesion must reasonably be supposed, it is not necessary, ay, it is even injurious, to institute closer examination either with the probe or the finger, in order to find the wound and to attempt its union. This union takes place of itself by the contraction of the muscular membranes of the intestine, and the compression of the abdominal walls against the intestines generally. In such a case, if necessary, only the external wound is to be united by one or more stitches to prevent protrusion of the intestines, and cold applications

have to be resorted to immediately, either by compresses dipped in ice-water, large enough to cover a large portion of the abdomen, or by a bladder filled with snow, or crushed ice. Where ice or snow cannot be had, Schmucker's fomentation may be applied for this purpose: R—Kal. nitr. ʒij.; ammon. mur. ʒss.; aq. font. frig. lb. iv.; acet. vin. lb. j. By this mixture an artificial coldness is produced, which in a measure is a substitute for ice. These cold applications have to be continued for six to eight days, first without interruption, after awhile in intervals in proportion to the diminishing tendency for inflammation; and whenever there is any appearance of an increase of this tendency, by the compresses getting warm sooner, and more heat appearing around the wound, they are to be repeated. The application of cold has to be done to such an extent that exudation of coagulable lymph takes place, and the healing of the wound can be obtained by first intention. In the judicious application of the proper degree of cold, and the extent of its continuation, consists the whole art of the surgeon—to attend to this particular duty,"

ART. 170.—*Case of Rupture of the Vena Cava Inferior.*

By Mr. GEORGE HARPER, of the Bengal Medical Service.

(*Indian Annals of Medical Science*, May, 1862.)

CASE.—R. C., æt. 45, of delicate constitution, temperate habits and nervo-bilious temperament, 25 consecutive years in India, health much broken, constantly suffering from congestion and torpidity of liver, rheumatism, etc.

On the 15th of October, when he was on duty at the riding-school his horse became restive, and making a sudden twist round, caused the riding master to use great muscular exertion of the lower extremities, to enable him to keep his seat, immediately after which, feeling the right leg stiff and uneasy, as if he had sprained it, he rode over to the hospital and reported the occurrence to me. I requested him to go to his quarters and have the limb well fomented. I visited him in about an hour afterwards and found the right lower extremity, from the ilium to the ankle highly ecchymosed, the greater portion of it of a deep dark colour and much swollen; there was however, no luxation of any of the joints, their motions being free, and the temperature of both limbs was the same or nearly so, but he complained of feeling the whole extremity very stiff and heavy. His countenance was very pale and shrunken, and he was evidently much shaken, Pulse 98, weak and unsteady. I ordered a stimulating draught to be repeated occasionally, and the fomentations to be continued. For some days he felt ill, without being able to say exactly what was the matter, his leg giving him no trouble except that of feeling a little stiff and heavy; he was, however, unwilling to leave his bed, had sleepless nights and began to lose his appetite. This was succeeded by irregular attacks of fever, which he said he thought he had slightly before the accident, for which antiperiodics etc, were administered, but without putting a stop to the fever. He then complained of having been seized through the night with great difficulty of breathing, feeling as if he were about to be suffocated, accompanied with violent throbbing in the abdomen; a circumscribed strongly pulsating tumour, nearly the size of a goose's egg was felt immediately above and

opposite the umbilicus, over which there existed a distinct bruit, and he had severe pain in the loins and abdomen, which became greatly increased, he thought, when the food was passing through the intestines over the tumour. The heart's action was rapid and somewhat feeble, but the sounds on percussion and with the stethoscope were otherwise normal. The above symptoms led me to suspect strongly that aneurism of the aorta, or common iliac existed, and, as the case was now evidently of a serious nature, requiring constant watching, I had him removed to a room in the hospital where he could be properly attended. I now requested the attendance of three or four of the senior surgeons in the station; in consultation all of whom coincided with me in the diagnosis, that there existed an aneurism of the aorta or common iliac. He daily became more exhausted from constant lumbar and abdominal pain, want of sleep and loss of appetite, the right leg continuing much in the same state, but giving little or no uneasiness. Strange to say, about a week or ten days before his death, the tumour began to decrease in size, but the pain and throbbing together with attacks of dyspnoea continued. His appetite completely failed, colliquative diarrhoea set in, over which the most powerful opiates, astringents, etc. had no control, and he expired on the morning of the 25th November, after great suffering.

Post-mortem eight hours after death. External appearance of the body—emaciated but well formed.

Abdomen—Liver considerably enlarged, but no organic lesion or adhesions. Small Intestines, much contracted in circumference—Aorta apparently normal, but the Vena Cava was enormously distended for about two inches before passing through the fissure in the posterior border of the liver, and filled with a large clot of blood. No aneurism of the common iliac existed, and the artery was carefully traced to below the popliteal space, but no rupture could be found. Nearly all the muscles of the thigh and leg were gorged with blood, especially the rectus, which was also ruptured, large clots being in and about the muscles. Kidneys were enlarged but otherwise apparently healthy.—Other organs normal. The brain was not examined.

ART. 171.—*Inversion of the Body in the Reduction of Hernia.*

By M. PRIOU.

(*Journ. of Pract. Medicine and Surgery, and Med. Circular*, July 16, 1862.)

M. Priou publishes, under the heading of "A New Method for the Reduction of Incarcerated Hernia," an article in the *Revue de Thérapeutique Chirurgicale*, from which we extract the following passages:

"I was recently summoned in three cases of strangulated hernia, which had resisted all attempts at reduction, and the surgeons were about to proceed to the use of the knife, when I was fortunately enabled to avert this undesirable alternative, by adopting a plan that suddenly occurred to me, and which I now communicate to the profession.

"I proceeded as follows:

"Climbing on the bed, on which the patient was horizontally stretched, and placing myself between his legs, I seized them

under the knees, and raised them in such a manner as to elevate the pelvis as much as possible, and completely invert the body. At the same time an assistant was directed to press the extruded intestine downwards through the ring, whilst I imparted gentle succussion to the body, in order to direct the viscera towards the diaphragm, which, by the inversion of the trunk, had become the most dependent portion of the abdominal cavity.

"This method is well calculated to facilitate the dislodgment of the incarcerated intestine from the inguinal canal."

This procedure is not a new one. Many years ago Amussat laid down the precept of proceeding to the reduction of hernia only after placing the patient in such an attitude that the weight of the intestines might contribute to their return into the abdomen. In 1844, Dr Hirigoyen, then clinical clerk at the Hospital Saint André, at Bordeaux, carried out Amussat's precept in the very fullest manner, and succeeded in two cases. The patient's legs were placed on the shoulders of a vigorous man who grasped them in his hands, and the patient, thus lying in an inverted position, the viscera descended towards the diaphragm. Reduction was effected without difficulty.

The procedure adopted by M. Hirigoyen closely resembles that now advocated by M. Priou: both are equally commendable, and repose on the same rational principles. Were we, however, compelled to make a selection between the two, we should be inclined to give the preference to M. Hirigoyen's method, which relieves the surgeon from the coarser details of the operation, and enables him to bestow all his attention on the taxis.

ART. 172.—*A new Operation for Strangulated Hernia.*

By Dr. PANCOAST, Surgeon to the Pennsylvania Hospital, &c.

In a clinical lecture upon a case of strangulated hernia, Dr. Pancoast takes occasion to speak of an entirely new operation, of which he believes himself to be the originator and the only surgeon who has performed it. This operation is the division of the stricture by subcutaneous incision, on essentially the same principle as that for the division of the tendo-Achillis or the soleus muscle for the cure of talipes. He has performed this operation in several instances with the most satisfactory results, curing the patient in much less time than is required by the usual operation, in some cases requiring the patient to lay by only a day. But it is only applicable in those cases where the stricture is at the external ring, and this should always be borne in mind. The operation is performed as follows: "A grooved instrument is first introduced some distance below the stricture, passed under the skin and fascia, and into the external ring, so as to raise it upon its point; the director being kept entirely outside the sac. A common bistoury (though that instrument is too much bent at the point to be an

appropriate one) is then *held firmly* with its back upon the grooved director through the integuments, just below the stricture. By rocking the handle of the bistoury backward, the point slides along the groove to the seat of the stricture, dividing it. Great care is necessary to avoid wounding the bowel, which lies very close to the knife, while if properly performed it is less dangerous than the ordinary operation. The hernia is then readily reduced, and a bandage and compress applied to prevent its return."

ART. 173.—*On Fissura in Ano.*

By M. ———.

(*Journal of Practical Medicine and Surgery, and Medical Circular,*
Oct. 22, 1862.)

Although in this disease internal remedies are less expeditious than surgical procedures, the medical treatment of fissura in ano is becoming daily more popular; and as it often proves successful, many of the most eminent French surgeons have recourse to forcible dilatation, or to the use of the knife, only when the injections of rhatany have failed in effecting a cure.

Although the formula of these injections is, doubtless, well known to our readers, their unquestionable utility induces us to reproduce it. M. Nélaton prescribes the following enema to be taken night and morning:—

R Extracti krameræ, ðiv;
Aquæ, ʒiv.

M. Trousseau adds to this solution one drachm of the tincture of krameria, an ingredient which, from the facts we have observed, does not seem an indispensable adjunct. In the case of a lady whom we visited with M. Nélaton, and who suffered from a fissure of some standing, consequent on copious leucorrhœa, a complete cure was effected in ten days with twenty enemas, containing altogether about 3½ oz. of extract of rhatany. M. Trousseau treated with success at the Hôtel-Dieu, during the year 1861, ten cases of uncomplicated fissure, and in all the pain was entirely removed in the course of ten days, and cicatrization was effected on the average in a fortnight.

It is necessary that the enema should be retained at least a quarter of an hour in the intestine, and it should be repeated night and morning as long as any pain is experienced when the injection is returned. After the suffering has subsided, one enema a day is sufficient, and subsequently, one every second day is required. If the practice were suddenly discontinued, the epithelium of the cicatrix would give way.

This remedy is, therefore, very efficacious, and its power cannot be called into question, but other modes of treatment may likewise be resorted to; and if, as M. Trousseau believes, the primary and principal feature of the disease is not the spasmodic contraction of the sphincter, but an irritation of the mucous lining of the intestinal

orifice, analogous to that which causes chaps of the lips, nipple, or vagina, the proper treatment is obvious in an affection often resulting from intertrigo, inflamed hæmorrhoids, or lochial, gonorrhœal, or leucorrhœal discharges.

The first prescription must be extreme attention to cleanliness. M. Trousseau recommends lotions with very warm water three times a-day, during moderate bearing-down efforts.

As a useful local remedy, we may mention the tris-nitrate of bismuth, mixed into a thin paste with three times its weight of glycerine or thick linseed tea, and applied to the seat of the fissure. This plan we have frequently found successful in cases consequent on labour, or inflammation of hæmorrhoidal tumours.

M. Trousseau prescribes the following preparations for external use, when the presence of a herpetic or syphilitic taint is suspected:

R Hydrargyri bichloridi, gr. iij
Liquoris calcis, ʒj;
Aquæ ferventis, ʒiij;

Or

R Hydrargyri bichloridi, ʒiiss;
Alcohol rectif., ʒvij.

A tea-spoonful of one or the other of these solutions added to two pints of water to be used in lotions three times a-day.

These compounds may be replaced by the pomades of Desault Régent, of Janin, mixed with lard or cerate. Nitrate of silver, tincture of iodine, are sometimes useful. Chloroform has been used with benefit by M. Chapel, but this latter appliance is very painful, and has disappointed the expectation of the practitioners who have resorted to it in the Paris hospitals in every instance, except in those superficial fissures which yield to almost any remedy, such as basilicon ointment, and may sometimes be cured by mere attention to cleanliness.

ART. 174.—*On the Treatment of Fistula in Ano, during the Progress of Consumption.*

By M. CHASSAIGNAC, Surgeon to the Hôpital Lariboisière,
Paris.

(*Journ. of Pract. Med. and Surgery, and Medical Circular, October 8, 1862.*)

Many surgeons and physicians consider the co-existence of pulmonary consumption as a peremptory objection to the operation for *fistula in ano*: but if we reflect on the origin of this opinion, and on the grounds on which it has been adopted, we find but arguments resting more or less directly on mere hypothesis. This theoretical view, which has passed into a sort of dogma, and has been reproduced by most authors without further inquiry, represents fistula as a sort of counter-irritant or issue, the suppression of which in chronic disease is usually injudicious. Now, M. Chassaignac demands what series of

carefully-observed cases can be adduced in support of such an opinion?

Fistula in ano is more frequent in consumptive subjects than is generally supposed. MM. Andral and Louis in 800 cases have, it is true, observed it twice only, but as M. Nélaton discerningly observes, this insignificant average is due to the fact that physicians are consulted for tuberculosis, and not for fistula, whereas the contrary is the case with surgeons. Now surgeons on the average meet with sinuses once in twenty patients affected with pulmonary consumption. M. Chassaignac himself has frequently seen *fistula in ano* in phthisis, and he has invariably found that this complication, far from being advantageous, was, on the contrary, highly injurious, indeed, as dangerous, as might be an extensive bed-sore. The causes which most powerfully promote the formation of tubercular deposits are undoubtedly physical and mental agencies of a depressive and debilitating nature. It is an acknowledged fact, assented to by the most eminent authors, that individuals weakened by any circumstance whatever, are especially liable to the development of tuberculosis. Pulmonary disease is the result of two morbid influences, the first of which is anæmia, and the second, the special diathesis. If, therefore, the operation of these agencies which induce anæmia is prevented, the manifestation of the tubercular diathesis will likewise be averted or considerably attenuated. But one opinion now prevails in this respect, and it is the certainty we have acquired of the correctness of this view that induces us to prescribe restoratives and tonics in the shape of cod-liver oil, cinchona, bark, chloride of sodium, iodide of iron, invigorating diet, &c., remedies which often ameliorate the position of the patient, and may even effect a cure by restoring the digestive powers, and awakening the activity of the nutritive process. But it is not enough to prescribe a reparative mode of treatment; if any permanent cause of debility is present it must as far as possible be contended with,—a remark which naturally leads us to the consideration of natural or artificial emunctories.

It was formerly a universal custom to establish an issue in the arm of every individual, in whom the persistency of bronchitis induced an apprehension of the development of tubercles. Observation and common sense have since caused this injudicious practice to be abandoned. Suppuration, as it has been truly said, is a cause of suppuration, and this morbid secretion is intensely exhausting. In many instances the mere suppression of an issue, or of a permanent blister, has restored flesh to emaciated subjects, and notably relieved the thoracic symptoms for which this unwise method had been resorted to.

These remarks apply to fistula. Clinical inquiry does not show the efficiency or necessity of this artificial emunctory, but, on the contrary, demonstrates that it causes debility by its double influence on the mind and body of the patient.

It is more especially since the substitution of the *écraseur* for the bistoury in the performance of the operation that M. Chassaignac has been enabled clinically to test the innocuousness and

advantages of the cure of fistula in consumption. The section of the sinus with the knife leads not unfrequently to untoward consequences, such as hæmorrhage, erysipelas, and sometimes even puriform absorption, and these results might possibly supply an explanation of the reluctance with which many distinguished practitioners consent to use the bistoury. The *écraseur* averts all these perils, and the division of the tract with this instrument is one of the simplest and most inoffensive of all surgical proceedings. M. Chassaignac does not, of course, venture to assert that it cannot give rise to any accident, but he has never met with any, and if any unfavourable complications were to follow the use of the *écraseur*, it would assuredly be due to some pre-existent visceral disease of a latent character, or to an extreme degree of weakness, which should have been considered as a counter-indication to surgical interference, especially under unsatisfactory hygienic circumstances, such as too frequently occur in hospitals.

Whether the fistula be a simple tract, or consist of many sinuses, M. Chassaignac applies indiscriminately the *écraseur*, and in cases of consumption he has never once met either with the impossibility of cicatrization, mentioned by M. Velpeau, nor with any general or local complication calculated to aggravate the condition of the patient.

In conclusion, so far from viewing the co-existence of phthisis as a counter-indication to an operation for the cure of *fistula in ano*, M. Chassaignac considers it as supplying an additional and imperative reason to proceed to its performance. He cannot agree in the opinion that suppuration established on some point of the surface of the body can be serviceable in pulmonary consumption, nor can he approve of the practice of placing issues on the thoracic integument. He adopts, on the contrary, the views of those who contend that every cause of exhaustion promotes the development of tubercular disease, and, therefore, unhesitatingly proceeds with as little loss of time as possible to the removal of sinuses which can be but an unfavourable complication.

ART. 175.—*On the Causes of Death following Lithotomy.*

By Mr. HENRY THOMPSON, Assistant-Surgeon to University College Hospital, &c.

(*Lancet*, March 8, 1862.)

A careful consideration of numerous facts leads Mr. Thompson to take views of this question which differ somewhat from those generally held respecting it.

In the first place, it is impossible to deal with the deaths following lithotomy as a single aggregate or class, relative to which any leading particulars can universally apply. Nothing can be more deceptive than a method of dealing with the results of lithotomy, whether numerically or otherwise, by which cases of all ages are treated indiscriminately in one category. The causes of death are not the same in adult life and in the period of youth; indeed, they vary so much as to render a separate consideration of them necessary.

Nevertheless, it has been the custom to regard the fatal contingencies of all ages in the mass without making the distinction. The differing liability to death at the two terms of life has, on the other hand, been amply demonstrated. Mr. Thompson considers, first, the causes of death amongst adult patients after lithotomy, examining them, as far as possible, in the order of their importance; and afterwards he investigates the causes of death in children.

The first, and, beyond all doubt, the most frequent, cause of death in the adult, is acute inflammation of the tissues, especially of the loose cellular tissue, around the neck, base, and sides of the bladder. This inflammatory action may be caused by mechanical violence; by urinary infiltration through too deep incisions; by want of reparative power in the patient, by erysipelas, &c.

1. By mechanical violence inflicted in the removal of the stone, especially when the opening is of insufficient size.

The majority of authors affirm that infiltration of urine is the most common cause of death—a statement which Mr. Thompson not only calls in question, but regards as the source of serious error in practice. Infiltration of urine is one of the causes of suppuration and destructive inflammation in the perivesical cellular tissues; but it is by no means the universal one. The doctrine based on this belief is as follows:—If the internal incision passes beyond the limit of the prostate in any direction, so as to open up the cellular interspaces behind the deep fascia, urine is almost certain to find its way into them; and if it does so, fatal inflammation will result; in order, therefore, to avoid this danger, the internal incisions must be extremely limited. But sound as the principle is to keep the internal incision strictly within the prostate in adult patients, in practice Mr. Thompson is satisfied that the desire to limit it has been carried to an extreme degree; and that another and not less serious danger of arousing inflammation of the same cellular tissue has by this very means been increased—this is the danger which attends an attempt to drag the calculus through an opening of insufficient size. From what he has seen of the practice of lithotomy in various hands, in town, in the country, and abroad, he is persuaded that insufficient internal incisions are equally dangerous with those which are too free; and that the tendency of the present day is toward the former extreme. The purely anatomical view of the subject appears just now to be in the ascendant. The *vital* attributes and dispositions of the organs involved are not sufficiently regarded. The student is taught to fear beyond all things an approach of the knife to the peripheral limit of the prostate; and, in over-dread of cutting it, he barely divides the prostate at all. Hence the no less dangerous injury which results from violence inflicted by the forceps and by the stone upon the neck of the bladder, and from the powerful traction upon it, which injures, often irreparably, the loose cellular connexions in which the viscus is imbedded—connexions which are delicate in structure and loosely applied for the purpose of permitting free extension of its parietes to the varying condition of size which its function as a reservoir of urine demands. Destructive inflammation of these delicate structures is easily produced by

the forcible dilatation and the dragging downwards of the neck of the bladder which insufficient incisions render necessary. Inflammation once extending through these structures rapidly invades the peritoneum, which, very probably, is more frequently implicated in this manner than by any other cause.

In connexion with this subject there is a very significant fact, the bearing of which we shall presently examine—viz., that while it is certain that the boundaries of the prostate are almost invariably overstepped by the knife in children, infiltration of urine very rarely occurs in their cases. Happily also, infiltration does not necessarily follow such incisions in the adult; but they render it more likely to occur. That the prostate has often been completely divided with impunity for the removal of large stones is certain; and the risk incurred from that cause is unquestionably serious. Danger is always great in a ratio proportioned to the size of the calculus; but this arises quite as much from the violence inflicted in removing it as from the depth of the incisions employed.

No one can deprecate more strongly than the author the making of an incision in the prostate more deeply than the size of the stone demands; but, at the same time, it is safer to extend the incision, when the stone cannot be extracted without exerting violence, than to inflict the injury which such a proceeding necessarily involves. The advocacy of small internal incisions by Scarpa, who laid down as an axiom that an incision of five lines into the prostate, with dilatation, sufficed for the extraction of a stone of more than ordinary size, and by Sir B. Brodie, in his lectures, as the *sole or chief* means of preventing urinary infiltration, has greatly influenced professional opinion on this subject. And the effect may have gone beyond the intention of its authors; since the force with which this particular source of danger has been insisted on by almost all subsequent writers, has led many to regard it as the only, or at least the main, evil to be feared in the operation; and thus, perhaps, has indirectly occasioned the oversight of danger in the opposite direction. In shunning Scylla we may encounter Charybdis, and a great obstacle to successful lithotomy lies on either side of our path, and not on one side only; in fact, we must preserve the neck of the bladder equally from too deep an incision, on the one hand, and from the mechanical injury necessitated by one which is too limited, on the other. Mr. Thompson fortifies his position by reference to the significant fact that the most successful operators have been those who advocated sufficient incision as less dangerous than violent extraction. Thus Martineau, who is well known to have cut eighty-four cases at Norwich with only two deaths, writes, in that brief and simple account of his method which he presented to the Medical and Chirurgical Society in 1821:—"Should the stone be large, or there be any difficulty in the extraction, rather than use much force, while the forceps have a firm hold of the stone, I give the handles to an assistant . . . while the part forming the stricture is cut, which is easily done, as the broad part of the blade becomes a director to the knife; and rather than lacerate, I have often repeated this enlargement of the inner wound two or three times."

At the same time, it is always to be remembered that the neck of the bladder is susceptible of dilatation to a very considerable extent, if it only be *gradually exerted*. It yields first to the pressure of the finger as it passes through immediately after the knife; secondly, it dilates further in the act of sliding in the forceps upon the finger; and lastly, it gives way still more when the forceps is withdrawn containing a stone between the blades, especially if it be a large one. This, its susceptibility of becoming dilated, is of the utmost value to the lithotomist. Indeed, if it did not exist, and largely too, none but small stones could be withdrawn through any incision limited to the prostate only. But in order to take advantage of it, the dilatation must be made slowly and gently. If done hastily, harshly, and forcibly, it is not dilatation which has been accomplished, but rupture. And by "rupture" Mr. Thompson does not mean the mere enlargement of the wound in the prostate and neck of the bladder, which probably is often legitimately occasioned, but the rupture of the surrounding cellular connexions with the numerous veins and the capillary network which traverse them—results of an extremely dangerous character. In this way inflammation of the cellular tissue, pelvic abscess, or phlebitis may be set up: suppuration is produced in a situation where the pus finds it way to the peritoneum, and not to the surface; and when this state of things exists, a deep incision would have proved a safeguard, rather than the contrary, by affording exit to the confined matter. It is wholly impossible, then, to overrate the importance of slowly and gently dilating the neck of the bladder and the incisions which have been already sufficiently made, and giving abundance of time in the act of introducing the forceps, and especially in that of withdrawing the stone. If there be any single proceeding in connexion with the practice of lithotomy, no matter what is the operation performed, which demands more than any other, care, attention, and self-command, it is the manner in which we traverse with instruments the wound in the neck of the bladder.

2. Death after lithotomy may result from rapidly spreading inflammation produced by urinary infiltration into the cellular interspaces between the pelvic viscera, when they have been opened up by too deep incisions.

This result, although undoubtedly occurring sometimes, does so much less frequently, Mr. Thompson believes, than is usually supposed. It is true that at a post-mortem examination, after a large stone has been with difficulty extracted, the cellular connexions of the neck and base of the bladder are found to be broken up; sloughs of the connective tissue appear bathed in fluid, sero-purulent and urinous; and marks of peritonitis, especially severe in the pelvis, are observed. But there is good reason to believe that in most cases urinary extravasation is not the primary cause of the inflammation, but that inflammation has been the occasion of the urinary extravasation. Cellulitis, produced by violence, has first destroyed the connexions in the manner described above, and then the urine has rapidly infiltrated the disintegrated tissue, and has lighted up a virulent peritonitis, or intensified a previously existing one. Such

appears to be the true explanation of the phenomena which mark the progress of events during the period, more or less brief, which follows the operation in many fatal cases.

Infiltration by no means necessarily occurs when urine passes over the newly made section of cellular *spaces*, so called; in fact, cellular interspaces between muscles and between viscera do not exist, except when made by the anatomist for the necessary purpose of demonstrating the planes of cellular tissue which unite adjacent organs, and facilitate freedom of movement between them. Mr. Thompson very much doubts if urinary infiltration ever occurs when they are otherwise uninjured, in a person of fair vigorous health. To judge from the language held respecting this subject, one would imagine that hollow intervals existed between the organs in question, over which urine had only to be poured in order to be drained mechanically into them. No such thing exists. In the child, where these interspaces are of the loosest and most delicate kind, and where the bladder is active, powerful, and irritable, urine is constantly poured out after this operation over the visceral interspaces which have been freely divided; nevertheless, with what extreme rarity do we meet with urinary infiltration in the child! But once inflame this cellular tissue, destroy its healthy character, or even perhaps let the patient be of unsound health, or one in whom "the flesh never heals well," to use a common phrase, and then we have the condition in which urinary infiltration may take place with rapid and fatal effect.

This doctrine is opposed to the generally received notions on this subject; but careful pathological study of the subject by the bedside of the dying patient, and at the subsequent autopsy, has convinced our author that the true cause of death in the majority of cases, the cause that it most behoves the operator to guard against, is violence in opening up the internal part of the wound, and laceration of the tissues there, and not the primary passage of urine into the intercellular connexions about the neck of the bladder. Happy is it if it be so, since the first it is in his power to avoid; the second is a danger which would be often inherent in the operation, and unavoidable with a stone much above the average size. That it is not an inherent necessity in the operation seems to be indicated in an early study of this difficult and important subject by the fact that forty or fifty consecutive cases of lithotomy might be cut, and have been cut, without a single casualty. If it were a fact that cellular interspaces could not be cut without the gravest risk to life, how could such a result be possibly accounted for? It was necessary to suspect the existence of another cause; and here the comparison of living phenomena with anatomical appearances leads to the conclusion that the cause is avoidable, and not inherent. That, to sum up the subject, in the great majority of cases, the cause of death is due to unnecessary violence inflicted on the neck of the bladder and parts adherent, causing destructive inflammation of the connective tissue and of the network of minute bloodvessels which pervades it, and that then, and not until then, does infiltration of urine occur, when it rapidly and frightfully augments the

already existing danger. In some cases a small quantity of poisonous fluid, associated with or resulting from decomposed urine, probably enters the circulation by absorption, and produces those depressing constitutional symptoms which always accompany this accident, and which are dangerous in proportion to the diminished capacity of the kidneys to eliminate them from the blood, and of the constitution itself to overcome the shock which it invariably sustains in these circumstances. Lastly, in all or nearly all instances, the irritating fluid soon reaches the peritoneum, and if the powers of life are not already exhausted, it gives rise to fatal peritonitis.

The remaining causes of death after lithotomy are simply named, time admitting of no detail. At the same time, somewhat less of importance attaches to them than to those already named. They are, cellulitis occurring from constitutional causes; inflammation of the bladder extending upwards to the kidneys; absorption of urinary products; phlebitis and pyæmia; shock; hæmorrhage and exhaustion.

The Causes of Death in Children.—The single cause of death in children, which must be placed first on the list from the frequency of its occurrence, is peritonitis, one which is by no means common in the adult. The next cause—and it probably operates almost as frequently as the preceding—appears to be constitutional exhaustion or debility.

It will make our path clearer if we first consider the causes which render lateral lithotomy so much less fatal in the child than in the adult, a fact notorious to the youngest student of surgery. Mr. Thompson believes them to be threefold. First, lithotomy is not a very fatal operation in the child because the sexual organs are not yet endowed with that special sensibility, the development of which constitutes the state of puberty—a sensibility which, depending on most intimate connexion between those organs and the cerebro-spinal system, necessarily associates them by the closest ties with all the other vital functions in the economy; so that any shock or injury received by the adult sexual apparatus very frequently involves constitutional sympathies of the gravest character in life. In the child, there is, in fact, no *sexual* apparatus—that is to say, its condition is at present rudimentary, and the young patient is exempt from the danger which exists in the circumstances pointed out. This is the first and the chief fact in favour of the child. The second consists in this—that the processes of growth, and consequently of repair, are more vigorous during childhood than during any other term of life, and injuries are more rapidly and more easily surmounted than when these processes are less active. There are special adverse influences at certain periods of childhood, which counteract to some extent the beneficial effect of this, as we shall presently see. Thirdly, the position of the bladder in children favours very greatly the continuous and complete discharge of urine and all noxious secretions after operation, a fact which is doubtless of some value in their cases.

Now the liability to death after the operation of lithotomy in childhood varies very much at different epochs of that period. Our

table of upwards of 1000 cases shows that from the second to the fourth year inclusive the deaths are about one in ten or eleven cases; that during the next year they slightly decrease; and that between six and ten years inclusive they are only one in thirty cases. Between eleven and thirteen the death-rate returns to one in fourteen cases, gradually rising between the fourteenth and sixteenth year to one in seven and a half, and from the sixteenth to the twentieth year to one in six cases.

During the first three or four years of life lithotomy is far less successful than during the subsequent period. The first dentition; with its dangers, is now encountered, and the excitable nervous system of infancy neutralizes some of the advantage which arises from the reparative power of childhood already referred to. But as those two constant sources of disease and death during the earliest years cease to be effective, we find the boy of six to ten years but very slightly exposed to risk from lithotomy, the mortality being one in thirty cases, or little over three per cent. The approach of puberty slightly darkens the shade between eleven and thirteen; shows itself in a marked manner between fourteen and sixteen; and during the first onset of its influence on the system, between sixteen and twenty, before the man is fully developed and before the body has become established and fortified, lithotomy counts its victims almost as numerous as at any subsequent period of life.

It has been already stated that the most frequent cause of death in children is peritonitis. The bladder in children is an abdominal organ rather than a pelvic one, and has more intimate relations with the peritoneum than the bladder of the adult possesses. On examining its structure also, it is easily seen that the peritoneum is more entitled to its anatomical distinction of constituting one of the vesical coats in the child than in the adult. Hence violence in extraction tells much more readily and directly on the peritoneum in the former than in the latter. In the adult we have seen that if the peritoneum is inflamed, it is rather by an extension through primary inflammation of the cellular tissue around the neck of the bladder than by direct irritation occasioned by the operation. The converse condition is the rule with children. The undue manipulation of instruments in the cavity of the bladder, or exertion in withdrawing the stone, appears to excite peritoneal inflammation much more readily than any other lesion. That it does not happen in children by the intermediate step of urinary infiltration is obvious from the fact that the prostate in them is so exceedingly small as to be almost always, if not invariably, cut wholly through in lateral lithotomy, yet without its occurrence. Indeed, it is not possible that either forceps or finger can pass into the bladder unless the incision exceeds the thickness of that organ. In considering this matter, there appears to be a tendency to forget a fact I have already alluded to—viz., the non-existence at this period, except in a rudimentary form, of any sexual organs. I have dissected many prostates in children; the size of one at seven years (let us add, therefore at the most favourable age for lithotomy) may be estimated from the fact that it weighs about thirty grains,

while from eighteen to twenty years it weighs 250 grains, or nearly nine times as much. And yet no infiltration of urine takes place, lax, delicate, and yielding as are the cellular interspaces necessarily exposed in these subjects.

Here then, again, as in the adult, the fatal injury from the operation is more commonly due to violence than to any other cause, but telling directly on the peritoneum rather than on the cellular connexions of the bladder. Such is the inference deduced from the study of numerous cases of death in children, respecting which the author has been in a position to form opinions. Some corroboration of the views here put forth may be found also in the facts respecting death, when it has been known occasionally to follow the mere act of sounding in children—viz., that it is always due to peritonitis. Fletcher, of Gloucester, in his most instructive record of "failures in lithotomy," relates the case of a child, six years old, and in excellent health, who died of acute peritonitis in three or four days after a prolonged sounding for suspected stone. Mr. Crosse also mentions a case precisely similar.

The next cause of death is exhaustion. Young children bear the loss of blood badly, and when it is considerable—an occurrence which, however, is rare—the patient sometimes sinks from consequent exhaustion. The condition of calculous children, also, if the stone has long existed, is occasionally low in the extreme, and they gradually sink without any apparent effort to rally, no active attack having declared itself.

Besides these two principal causes of death, there are occasional examples of fatal result from shock after very prolonged or severe operations; from disease of the kidneys and bladder; from phlebitis and intra-pelvic abscess, which demand no special remark here.

ART. 176.—*An Analysis of 230 Cases of Lithotomy.*

By Mr. THOMAS BRYANT, Assistant-Surgeon to Guy's Hospital.

(*Proceedings of the Royal Medico-Chirurgical Society*, April 22, 1862.)

This communication was based on an analysis of cases collected from the records of Guy's Hospital of the last twenty-five years, the author's own notes supplying every example during the last eight. A table illustrating the principal points accompanies the paper.

Frequency of the Operation of Lithotomy at the different Periods of Life.—From his own cases, Mr. Bryant shows that nearly one-third of the whole number of cases tabulated occurred in children under five years of age, and about one-fourth between five and ten years of age; more than half, or 56 per cent. of all the cases having taken place in children during the first ten years of life. This tendency in childhood to calculous disorders certainly is not a disease of debility, but appears to belong to a condition of body which is not far from sound health; it being an unquestionable fact that the healthiest-looking and apparently best-nourished children admitted into a London hospital are those suffering from stone.

In every succeeding Five or Ten years' Period passed after Ten Years of age, the Presence of a Stone becomes more rare.—Between the ages of ten and fifteen, it appears to be half as frequent as it is in the preceding quinquennial period; and this number may be again halved between the ages of fifteen and thirty. In middle adult life, lithotomy is an operation of some rarity, lithotritry being then more applicable; but in old age, lithotomy appears to be rather more frequent.

Mortality of the Operation.—In quoting the results of the analysis of his own table, the author compares them with those given in the *Medical Times and Gazette* on January 8th, 1859, which latter included the general experience of the London hospitals for three years and a half. With five exceptions the whole of his own cases have been operated upon by the lateral method.

Mortality of the Operation at different Periods of Life.—During the first ten years of life it is the most successful, 1 case only in every 21½ being fatal. In the journal above mentioned the average of this period is 1 in every 13·6.

Analysing the cases under ten years of age, it is shown that at the age of two years, 6 cases were recorded, 1 of which died; but the cause of death was evidently acute bronchitis, and, therefore, unconnected with the operation. At the ages of three and four, 44 cases are tabulated, with not one fatal example. Between five and ten, 79 cases are recorded, five of which died, or about 1 in every 16. In two of these five cases, hæmorrhage was the assigned cause; but in both there had been distinct evidence of the presence of the calculus for at least two years, or for nearly half the patients' lives. In two cases, aged nine and ten, symptoms had existed from birth; and in both a subsequent examination revealed old and extensive renal disease. From this it appears, that in children under ten years of age, the dangers of the operation were very slight, particularly if the symptoms of stone had not been of long standing; for if the symptoms have not existed for a lengthened period, there is good reason to believe that the kidneys are sound, and if so, the risks of the operation are a mere nothing. If, however, on the other hand, there have been evidence of the presence of calculous disease for some years, or for a large portion of the child's life, renal disease may assuredly be suspected, and the danger to life by an operation will consequently be much magnified, the dangers of lithotomy being exactly in proportion to the extent of the renal affection, and this being fairly measured by the duration of the symptoms.

Passing on to the next decennial period, including those operated upon between the ages of ten and twenty, 49 cases are tabulated, 5 of which proved fatal; but on these being again divided, it is shown that between the ages of ten and fifteen—that is, before the period at which the genital organs have become developed—the mortality was much less, 2 cases only dying out of 31; whereas between the ages of fifteen and twenty, when the genital organs had become parts of importance, the mortality is twice as great, 3 cases proving fatal out of 18—the risks of the operation being just

three times as great. The cause of death in these cases is also shown to have been renal disease.

In young adult life—that is, up to the age of forty—1 patient every 6½ is shown to have died; but beyond forty years of age the mortality had increased to 57 per cent., more than one-half sinking after the operation.

On looking for the causes of death in the 19 cases which proved fatal in patients above forty years of age, a striking fact becomes manifest. In 10 a *post mortem* examination was subsequently made, and in all extensive renal disease was readily detected. In all there had been evidence of a calculus being present for many years.

The author dwells for some time upon the fact that the cause of death in the majority of the cases was renal disease, and shows that, if this complication is a fatal one after most operations, it is palpably of greater importance to the one which he is now considering. In the preceding part of his paper he has shown how fatal the complication had been at different periods of life, and he thinks that it might be safely asserted that, from the earliest to the latest periods of life, the risks of lithotomy are exactly commensurate with the extent of disease in the renal organ. Thus, in young life, when this is by no means of common occurrence, a good result as a rule takes place; but at a later period, when its presence is more frequent, a bad result has too commonly to be recorded.

The fact that peritonitis and pelvic cellulitis are present in a large proportion of the cases examined does not appear to be an argument against the view that disease of the kidneys is the chief cause of death, for the author asserts that physicians and surgeons are all well aware of the intimate connexion which exists between renal disease and inflammation of the serous membranes. In medical practice it is well known that this form of inflammation is the immediate cause of death in most examples of Bright's disease. And regarding the question from a surgical point of view, it is clearly open to a doubt whether so many patients would sink with peritonitis and pelvic cellulitis after lithotomy—whether young or old—if they had not been rendered prone to such inflammations by the presence of a renal affection.

As a practical conclusion, the author is led to assert that—

The dangers of lithotomy as an operation, independently of accidents, are not great; and that a fatal result from such alone rarely takes place.

Where death follows, renal disease is the cause in almost all cases; and this renal affection appears to follow almost necessarily upon the long existence of the calculus.

The duration of the symptoms is the best and surest guide to the diagnosis of the complication; and in proportion to the period of their existence are the renal affection and its extent to be suspected, and as a result is the danger of the operation to be dreaded.

The necessity of the early detection of a calculus becomes, then, an important point, and its early removal imperative.

The author then compares the number of stone-cases admitted into the metropolitan hospitals with those that were operated

upon forty years ago, and shows that the number of cases in the present day had not diminished; consequently, that the fear was groundless which originated the idea that, from the freedom with which stone-cases were operated upon in the provinces, the metropolitan institutions would be deprived of their practice.

ART. 177.—*A New Operation for Lithotomy.*

By Mr. FERGUSSON, Surgeon to King's College Hospital.

(*Medical Circular*, April 9, 1862.)

This operation, was suggested by the success of many recent vesico-vaginal operations. in the hands of Mr. Baker Brown and others. The patient was a female child about 12 years of age; the calculus was a mulberry stone as large as a walnut. The ordinary operations of dilatation or lithotomy were, therefore, unadvisable, and Mr. Fergusson decided to cut into the bladder, through the upper and anterior wall of the vagina, a proceeding which proved remarkably successful. Mr. Fergusson finished the operation by passing a ligature, and closing up the wound thus made, after the manner so successful in the vesico-vaginal operation.

ART. 178.—*Lithotomy in the Female by the Lateral Method.*

By Mr. GEORGE BUCHANAN, Surgeon to the Glasgow
Royal Infirmary.

(*Medical Times and Gazette*, March 23, 1862.)

CASE.—Jessie W., aged 6 years, was admitted into the Glasgow Royal Infirmary on February 17, 1862. She has suffered from the present symptoms for upwards of a year, but they are daily becoming more urgent. She has very frequent calls to void urine, which is done with great pain, and is sometimes arrested before the desire has passed off. There is almost constant dribbling away of urine, which has the effect of keeping the labia and upper parts of her thighs excoriated and very irritable. She cannot sleep at night, is very peevish, and has a worn-out and sickly look. A sound introduced into the bladder detects a stone apparently the size of a filbert. I have rarely seen a case in which the local irritability was so acute. The slightest touch on the labium, vagina, or meatus urinarius caused the poor thing to shrink and writhe from the contact. She was kept a few days at rest in bed, the strictest attention being paid to cleanliness and keeping her dry, and on February 20, the irritation being somewhat less, I proceeded to operate in the following way:—

The child having been put under the influence of chloroform, was placed in the usual lithotomy position. I then introduced a rectangular staff, the horizontal part of which was about two inches and a-half long, and directed it to be held up under the arch of the pubis, as in the ordinary lateral operation of lithotomy in the male. A small incision was now made into the left nympha, taking care to avoid opening the vagina on the one hand, and cutting too near the tuber ischii on the other. Introducing my left forefinger into the wound, I easily felt the groove in the staff, and guiding the knife along the nail, passed it through the neck into the bladder, and cut out into the former wound. The incision in the neck of the bladder was

not large, but the left forefinger thrust into the wound at once dilated it to the required extent. The stone was readily extracted, and was found to weigh half an ounce and forty grains.

27th.—I never saw any case in which such a sudden and marked change for the better took place. This morning the little girl is quite lively, free from pain, has slept well, and took her food with relish, and the nurse reports that she has difficulty in inducing her to lie quiet. There was no bleeding, and urine flows freely from the wound, and she is in every way favourable.

The wound healed up in a fortnight, the urine all coming by the urethra some days before. She was dismissed well on March 22.

When the wound first closed she did not retain her urine. I did not expect she would, because she had been in the habit of letting the water dribble away for more than a year before the operation, and it was not likely that she would acquire the habit of retaining it all at once. On, however, telling her what to do, and instructing the nurse to be very careful in watching her, the power over the bladder became more marked, and before she left the hospital she could retain her urine almost the whole day, although she still passed some in bed. I have no doubt, from what she acquired in a few days, she will soon be able to have perfect command over the bladder.

The operation above described was performed many years ago by Dr. A. Buchanan, and he informs me that he did it six times with the best results. In the present case the size of the stone precluded the idea of dilating the urethra to an extent sufficient to allow of extraction by it, while the extreme irritability, both of the bladder and urethra, rendered it a very unsuitable case for lithotripsy. The operation I performed is simple, safe, and effectual, and the results of cases in which it has been performed are most encouraging. A case in which it was performed is reported by Dr. Morton, in the second volume of the *Glasgow Medical Journal*; the woman regained command over the bladder after the wound healed.

ART. 179.—*Dilatation of Stricture in the Urethra with a New Instrument.*

By Dr. J. H. HOBART BURGE.

(*American Medical Monthly*, June, 1862.)

Dr. Burge recommends an instrument which consists of several concentric cylinders curved in the arc of a circle, the external or largest cylinder being about the size of No. 10 catheter, and the internal or smallest about the size of No. 2. The smaller sizes are all projected at will by means of knobs near the handle. The design is to carry the instrument *in full size* to the point of stricture. The moment the obstruction is felt, the largest of the *contained* cylinders is to be advanced till it in turn meets with some obstruction, when, in like manner, the next size must be pushed forward, and so on, always from *larger* to *smaller*, till the stricture is passed. Dr. Burge says, "to prevent misapprehension, I contrasted this instrument with that of Wakley's, which consists of a style and several separate cylinders; the design being, first to introduce the style, and then, successively, the cylinders upon the style, always proceeding from *smaller* to *larger*; which instrument, though it

possesses some advantages over the ordinary bougies, inasmuch as it obviates the necessity of frequent introduction and withdrawal, is practically the exact opposite of mine, and involves all the danger of injury to the passage which attends the use of a fine instrument with nothing to guide it in the way it should go. To be sure, the style once introduced is a sure guide to the cylinders sliding thereon; but the difficulty consists in safely introducing the style, which of necessity is very small. It is clear to my mind, that even in those cases in which recourse must be had to the finest instruments ever used, there is great advantage in gently dilating the canal all the way down to the stricture, and especially just where the contraction begins, thus removing any folds of membrane which might otherwise engage the point of your instrument. By the larger cylinders of this multiple bougie, this dilatation is effected and maintained, while the smaller are safely guided by them in the proper direction. At first a style occupied the centre of this instrument, and filled completely the smallest of these cylinders. *That* I have caused to be removed, and a bore to be made in the handle continuous with the canal thus formed, so that when the stricture is passed, the patient may have instant relief from a distended bladder. Lest the smallest of these cylinders should prove, as it sometimes doubtless will, too large to enter, I have provided an independent style of sufficient length to pass through the handle and emerge at the point. This, of course, is to be used without withdrawing the instrument. If the use of the style become necessary in a given case, and with it we succeed in passing the stricture, there can hardly be any difficulty in sliding upon it the smallest cylinder, after which the style may be immediately withdrawn and the urine allowed to escape. It will at once occur to you that many strictures occasion a tortuosity of the urethra, and that a firm metallic bougie cannot be made to follow these unnatural windings. To obviate this difficulty, I have suggested to Messrs. Tiemann & Co. to provide with each instrument some long, flexible bougies, small enough to enter the bore of this.

"Some may ask, if we must resort to a flexible instrument, why not do so without the intervention of the metallic? I answer, because the metallic acts as a *sure* guide down to the very seat of the difficulty, and keeps all folds of mucous membrane from obstructing and turning back the point of the flexible. There is but one more division of my subject which I propose to mention, and you will excuse me for introducing it with words of warning.

"Cases of stricture do occur in which all simple means of relief fail, though I believe the patience of a patient man should be exhausted before the more heroic measures are adopted. If, then, after faithful and ineffectual trial of all means, both local and general, the surgeon deem it advisable to divide the stricture, I have made provision for that necessity in this instrument. A second style is furnished, in size and length corresponding to that already described, and differing from it only in having a cutting extremity. This is to be introduced through the handle, while the main instrument is held as a guide to the strictured part. God

forbid that I should recommend any measure so fraught with danger as this, without throwing around it all possible safeguards. Let it, then, be distinctly understood, that this is to be held in reserve for extreme cases, and always as a *dernier ressort*, and that the part to be divided is to be first fairly reached by advancing the cylinders from larger to smaller, as already described; and lastly, that the operator decide in advance how far his incision shall extend, and gauge his instrument accordingly, by means of the revolving nut arranged for that purpose upon the handle."

ART. 180.—*On an Undescribed Variety of Blennorrhœa of the Male Urethra.*

By M. DIDAY.

(*Arch. Gén.*, xviii. p. 385.)

M. Diday speaks of a variety of blennorrhœa which is distinct from the ordinary type. The quantity of the discharge is small, only a drop in eight or ten hours; it is clear, either white or yellow, transparent, capable of being drawn out in threads. The patient experiences some heat and tickling, but no considerable pain, and especially no *erections*: and this mild character distinguishes the affection from first to last. According to M. Diday, the duration of the complaint is never less than a month, usually longer; there is no pus in the discharge, only epithelial cells of various sizes; the cause of the affection is always to be found in *connexion with a menstruous woman*. The incubation lasts only from twenty-four to thirty-six hours. The cure is always slow: ordinary anti-gonorrhœal remedies are useless, especially the abortive method by injections: the best results are to be obtained from antiphlogistic measures; and if these have been tried for some time in vain, a daily injection of weak solution of sulphate of copper should be tried.

ART. 181.—*Case of Section of the Abdominal Wall or Rupture of the Bladder.*

By Dr. WALTER.

(*Philadelphia Medical and Surgical Reporter*, February, 1862; and *Schmidt's Jahrbücher*, August, 1862.)

CASE.—A man, aged 26, in good health, received a blow on the lower part of the belly; he almost fainted, and complained of violent pain in the region of the bladder. Some hours later, the belly had swelled and became very tender, especially just above the pubis; the pulse was small and frequent, skin cold, respiration hurried, urination almost impossible, and there were nausea and vomiting. A catheter introduced into the bladder withdrew a very little bloody urine, without relief. Three grains of opium were given at once, and a grain every half-hour afterwards: the catheter was kept in, the thighs were flexed, and fragments of ice given to the patient to suck. No relief being thus produced, it was resolved to open the belly. Accordingly, ten hours after the accident, chloroform was administered, and an incision was made in the *linea alba*, commencing one inch below the umbilicus

and terminating one inch above the pubis. The intestines were found distended with gas, and their vessels were beginning to be injected. A sponge was introduced into the peritoneal cavity, and mopped up nearly a pint of urine and extravasated blood : a rent was observed in the base of the bladder two inches long. As soon as all the urine was evacuated, the bladder was left to itself, and the abdominal wound was closed with pins retained by silver threads, care being taken not to involve the peritoneum. A flannel bandage was placed round the belly. The patient on waking from the chloroform appeared much relieved, the vomiting ceased. One grain of opium was ordered to be taken every hour, the general treatment as before. The night passed well ; on the next day there was no pain nor desire to micturate, and no tympanitis : a little iced water was now allowed. The catheter gave exit to urine unmixed with blood. On the third day the quantity of opium was reduced ; at the end of the first week the wound appeared to have united by first intention, but the sutures were not removed till the end of a fortnight : during the third week the catheter was only used every four hours, and after this the patient sat up, and passed his water voluntarily every four hours. Complete recovery resulted.

ART. 182.—*Removal of a Piece of Catheter from the Female Bladder.*

By Dr. G. BUCHANAN, Surgeon to the Glasgow Royal Infirmary.

(*Glasgow Medical Journal*, Jan. 1862.)

CASE.—Mrs. A., aged 36, was admitted to the Royal Infirmary on the 18th of October, 1861. She gave the following account of her case :—Nine years ago, when three months advanced in pregnancy, she experienced much difficulty in voiding urine, which required repeated catheterism. In a subsequent pregnancy six years ago the same thing occurred. At present she is again pregnant, and about a fortnight ago the inability to void urine occurred as before. Having experienced relief from the use of the catheter formerly, she of her own accord endeavoured to relieve herself by using an instrument something like a catheter, made for her by her husband, who is a worker in gutta percha. On passing it into the bladder, either through awkwardness in manipulation, or from the insufficient nature of the instrument, a piece about three inches long was broken off and remained in the bladder. Several attempts were made by a surgeon to detect and remove it, but without effect, and she continued to suffer great pain and inconvenience from its presence till the present time.

On admission she complained of great pain in the lower part of the belly, and any attempt at voiding urine was attended with increased suffering. She was weak and anxious-looking. I saw her on the morning of the 19th, and proceeded to extract the foreign body. She was put under the influence of chloroform, and placed in the lithotomy position. I found the urethra so much dilated by the previous attempts that I could introduce the point of my little finger, so that a pair of forceps were without difficulty slipped into the bladder. Although I could easily grasp the foreign body, its peculiar shape prevented me from laying hold of it in a position favourable for extraction, and it was only after repeated attempts that I at last succeeded. This was accomplished by seizing it in the middle, and pulling it forwards against and across the urethra. I held it in this position by introducing the left fore-finger into the vagina, and pressing the foreign body against the

point. I now found the fore-arm and hand very stiff, and on a
 second and third day after the first, the arm and hand were
 the out, being thus rendered to be in a position of flexion and
 about three-fourths of the way. I was then able to move the
 arm and hand and a good deal of the way, and of it the patient
 said that was much better than a state of total immobility. The patient
 however, being unable to move the arm and hand from the elbow, the
 doctor then set him in the elbow, and after the arm was set, the
 hand was also moved.

ON DISSECTING THE UPPER EXTREMITY.

THE CASE—*Case of Dissection of the Upper Extremity*
Showing the Dissection of the Muscles.

By M. CASSIN.

British Medical Journal, November 21, 1882.

It is generally well supposed that dissection of the upper
 extremity should be made without fracture of the humerus. This
 idea, however, is incorrect in the matter of the arm. The
 humerus is the main support of the arm, and if it is broken, the
 arm is rendered useless. It is therefore, as a rule, not to be
 done if the humerus is broken. The humerus is the main support
 of the arm, and if it is broken, the arm is rendered useless. It
 is therefore, as a rule, not to be done if the humerus is broken. The
 humerus is the main support of the arm, and if it is broken, the
 arm is rendered useless. It is therefore, as a rule, not to be done
 if the humerus is broken. The humerus is the main support of the
 arm, and if it is broken, the arm is rendered useless. It is
 therefore, as a rule, not to be done if the humerus is broken.

CASE—On April 12th, a lady, aged 35, had her arm and hand caught in
 a mill. The hand was slightly lacerated; the forearm was broken at the
 middle; there was no much swelling of the elbow, and a large vein
 was easily detected. The back part of the elbow was flattened, the
 bones of the lower end of the humerus especially the epicondyle prominent
 considerably; the forearm was half bent and could be extended and flexed
 but with great pain; the olecranon could be distinctly felt in front of the
 elbow. M. Cassin, in whose care the case was, attempted to reduce the
 dislocation by extension. Failing in this on account of the supposition of
 the shortness of the leverage which was left in consequence of the flattening,
 he forcibly forced the elbow over the arm of an assistant, and soon reduced
 the luxation. The patient was able to resume her work in forty days.

ART. 184.—*Case of Malignant Pustule in the Arm.*

By Mr. FURNESS JORDAN, Assistant-Surgeon to the Queen's
 Hospital, Birmingham.

(*Medical Times and Gazette, and Dublin Medical Press, October 8, 1882.*)

CASE—Thomas D., aged 26, an outlier, constantly at work with the
 shirt-sleeves turned up. Married; previous health, so far as can be learned,
 good; of medium height and stature; hair, irides, and complexion dark.
 He was admitted into the Queen's Hospital on August 14th last. Six
 weeks previously a pustule appeared on the back of the right fore arm near
 the wrist. This he scratched, and, he states, there immediately followed

great, indurated, and painful swelling, which was quickly covered with pustules, and here and there black patches. The swelling extended during the next few weeks to the hand, along the fore-arm, and above the elbow. The pustules appeared very thickly on the fore-arm, and covered all the parts which were not destroyed (by sloughing partly and gangrene chiefly).

Present state (August 27th): The countenance is very sallow and indicative of great cachexia, slight but frequent cough, with trifling expectoration. No dyspnoea. Intelligence and special senses unimpaired. Marked prostration is present. Tongue much furred but moist; appetite absent. The right fore-arm is twice its natural size, the enlargement being chiefly at the extensor surface. There are several spots where the skin has disappeared, of a greyish yellow and black colour. The black colour predominates, and the skin is more extensively affected than the subjacent cellular tissue. The characteristic odour of gangrene is very powerful. Where the integument remains, it is covered (thickly on the extensor, more sparingly on the flexor, surface) with pustules as large as a threepenny-piece; the summits of these have been removed so completely, and the central depression is so well marked, that they present a singular ring-like appearance, not very unlike syphilitic "*lepra tuberculosa*." The hand, elbow, and upper arm are also much enlarged and hard, and present a few black (gangrenous) patches. One of these black indurated swellings on the front of the upper arm is three or four inches in diameter. The blackness is not uniform, but in irregular spots and streaks. The swellings are attended with severe pain. The skin between the pustules and black portions is everywhere of a pale yellowish tinge. There are no pustules on the recently formed hardness of the hand and elbow and upper arm, where the pale yellow skin shows only gangrenous mottlings in the centre of the indurated enlargements. Over a portion of the large mass at the front of the upper arm (the most recent formation), the epidermis is separated by a collection of serum, in quantity about half an ounce.

On the same day that I made the above examination, I removed the arm near the shoulder by the rectangular method of Teale. Six hours after the operation the patient seemed better, and expressed his sense of relief from the pain which had attended the disease. In a few hours after this the cough became much worse, and was accompanied by extreme dyspnoea. There was excessive perspiration. Thirty hours after the operation death occurred from a combination of apnoea and asthenia.

Examination of the Arm after Removal.—Except at those portions of the surface where the skin and superficial cellular tissue had been destroyed, the whole of the connective tissue of the fore-arm was hard, solid, comparatively dry, and enormously increased in quantity. The sensation on using the knife was that of cutting a raw, tough, resilient apple. The fore-arm was like a large fibrous tumour, enclosing the bones and muscles, which were unaltered, save that the muscles were a shade paler than usual. The vessels were healthy and pervious. The nerves were, singularly, much increased in size, the median being like the sciatic nerve of a child. At the sloughing and gangrenous spots the greyish hard connective tissue became yellow, and enclosed here and there a few small masses of concrete pus; but it still remained tough, resisting, resilient, and dry. Underneath the black patches the hard grey tissue was freely speckled with black spots. The sickly, gangrenous odour was very intense. I examined, under the microscope, small portions from the grey hard connective tissue, from the yellow tissue bordering on the disintegrated surfaces, and the concrete pus. The hard grey parts consisted of nucleated (one, two, or three nuclei, mostly in process of division) cells, round, oval, and elongated, very variable in size.

In the yellow part, besides these appearances, there were disintegrated cells and free nuclei, and the nucleated cells themselves contained much fat. The apparently concrete pus was mostly fatty disintegrated cellular tissue, with small irregular pus-cells and peculiar needle-like crystals (probably cholesterine).

Examination of the Body after Death.—The head was not examined, as there had been no symptoms indicative of encephalic lesion. The lungs were gorged with serum; the upper lobe of the left lung was hard and barely crepitant. Both pleuræ and the pericardium contained each between three and four ounces of serum. The cavities of the heart contained partially decolorized clots; these were larger on the right side; and the coagulum in the right ventricle extended some distance into the pulmonary artery. The abdominal viscera were healthy.

ART. 185.—*Aneurism of the Palmar Arch Treated by Chloride of Zinc.*

By M. NÉLATON.

(*Journal of Practical Medicine and Surgery*, May, 1862.)

CASE.—A labourer, forty-eight years of age, was admitted under the care of M. Nélaton, on the 20th of January, on account of an abscess of the hand. The abscess was opened, and pus escaped. Arterial hæmorrhages supervened at various intervals until they amounted in number to eight or ten. At last the bleeding ceased to recur, and a small aneurism appeared in the situation of the palmar arch. It resembled a granulation, was of the size of a pea, of a violet colour, and its pulsations were isochronous with those of the palmar arch. On the 1st of February, a final hæmorrhage having taken place on the occasion of the rupture of this little pouch, M. Nélaton determined to attack the aneurism with a powerful caustic. Accordingly, on the 3d of February, a portion of paste of chloride of zinc a little larger than the tumour was applied to it, and was surrounded with wadding, in order that the action of the caustic might be limited to the sac. The day passed without any particular pain being experienced, and no change was made in the application. On the following day, there was seen in the place of the paste a hard black mass; this was an eschar which separated three days afterwards. On the next day (the 8th) no pulsation was perceptible; a coagulum had formed in the aneurismal sac after the destruction of the latter, and this clot, extending into the artery, had obstructed its calibre in a sufficient extent to present an obstacle to the occurrence of hæmorrhages.

ART. 186.—*On the Treatment of Morbus Coxæ.*

By M. NÉLATON.

(*Journal of Practical Medicine and Surgery, and Medical Circular*,
July 9, 1862.)

In a clinical lecture recently delivered in the Hospital of the School of Medicine at Paris, is a case illustrating what surgery may do for the rectification of limbs contracted in the highest degree. The whole lecture is worth studying, but our space only allows room for the case.

CASE.—A young lady, a foreigner, aged 18, of brilliant health and complexion, had been six years before affected with morbus coxæ; she had recovered, but the disease had caused a contraction of the thigh so considerable that the limb was in contact with the abdomen. The dorsal region, at the same time, had sunk in to that degree that, when the patient reclined on her back, a man's head might without exaggeration have been passed under her. She had consulted all the surgeons in Europe, and repaired to Paris, fully determined to undergo the most painful operations, if any hope could be held out of relieving her of an infirmity of so cruel a character. M. Nélaton carefully examined the parts during anæsthesia, and ascertained that the movements in the joints were so obscure and limited, as to be equivalent to almost entire immobility. But, encouraged by the robust health of the young patient on the one hand, and on the other by her determination to seek relief at all hazards, he boldly persevered in his efforts at rectification. Several attempts were made to effect this purpose, the pelvis being securely fixed by assistants, but without any result. Mechanical appliances were then resorted to. The patient was laid on a well-padded orthopædic bed, and secured on this solid couch by a wide belt which surrounded the chest and abdomen, and prevented any displacement of the pelvis. The fulcrum of counter-extension was taken at the axillæ. A system of pulleys was then applied to the knee by means of a knee-cap bearing appropriate hooks. The operator then, grasping the femur, moved it like a winch-handle to effect the laceration of the adventitious ligamentous bands, which intimately connected the head of the bone with the capsule; but even with this enormous power the attachments remained firm after six operations.

M. Nélaton in his despair entertained a hope that the neck of the femur might perhaps give way, and considered this as the most advantageous object he could achieve in so difficult a case. A final attempt was therefore made. The circumstances were momentous in the highest degree; a strange, fearful sound was heard in the hip-joint, the limb spontaneously stretched itself out, and fracture of the neck of the femur was supposed to have taken place. An appropriate apparatus had been beforehand prepared in the expectation of this contingency. The patient was laid in Bonnet's groove, and was treated up to the fortieth day as if fracture had really occurred. Gentle movements were then daily communicated to the extremity, in order to promote the formation of a false joint, and the patient progressed in so unexpectedly favourable a manner that, in this singular case, M. Nélaton still remains in doubt whether fracture and subsequent pseudarthrosis were really induced.

Indeed, palpation never distinctly revealed the presence of a false joint, and one thing alone remains evident—viz., the perfectly satisfactory results of the operation; the young lady now goes into society, dances and rides, and no trace whatever remains of her former condition, beyond an unimportant irregularity in the standing attitude. When both feet are placed on the same line, the figure slightly bends forward; but this ceases as soon as the foot on the diseased side is instinctively advanced two or three inches.

(D) CONCERNING THE INFERIOR EXTREMITY.

ART. 187.—*On a Case of Dislocation of the Head of the Thigh-Bone into the Obturator Foramen, reduced with the Heel in the Perineum.*

By Mr. JOHN ADAMS, Surgeon to the London Hospital.

(*Lancet*, May 3, 1862.)

CASE.—A middle-aged man was assisting in the unloading of a cart filled with bales of wool, and was standing below to keep the foot passengers out of danger, when a large bale came to the ground from the cart and, falling on his head and neck, forced him to the earth. His body was bent forward at the time of the accident, and his legs were slightly separated. He was found to have sustained some injury to his right hip, and was brought immediately to the hospital.

He was in great agony, much depressed, and complained of pain in the pubic and perineal regions. A very cursory examination sufficed to prove the nature of the accident. The right thigh was separated from the left and somewhat advanced, and as the man lay upon the sofa the attempt to depress the thigh caused great pain. The foot was but slightly averted. On placing the hand beneath the pubis I found the adductors stretched forcibly over a firm unyielding mass—the head of the femur; the nates were completely depressed, the great trochanter having disappeared from view. I did not measure the length of the limb, for I was satisfied at once of the nature of the injury.

The reduction was accomplished under chloroform with the greatest facility in the following manner:—The patient lying flat on his back on a sofa, I directed one of the house-pupils to place himself as if about to reduce a dislocated shoulder of the right side, and to fix his heel in the perineum, defended by a square soft pad; inclining the fulcrum thus formed against the head of the thigh-bone, a jack-towel was fixed by a clove-hitch knot above the knee, and by the aid of pulleys the bone was reduced, and the head of the femur slipped at once into the acetabulum. The knees were tied together, and the man was sent to bed.

The simplicity of the proceeding was apparent, and I am sure that even without the aid of pulleys a recent dislocation of this nature may be reduced as readily as a dislocated shoulder. There is no necessity to place the patient under the profound influence of chloroform; it is enough in most cases to influence him so far that his attention is altogether diverted from the injury. I have never witnessed the attempt to reduce a dislocation of the hip-joint of this nature in this manner before; but I dare say it has been done. I once saw my late colleague, Mr. Nathaniel Ward, reduce a dislocation of the thigh on to the dorsum ilii, with the heel in the perineum, in a child, and I was much surprised at the readiness with which the affair was accomplished. The dislocation of the thigh-bone into the obturator foramen more closely resembles the dislocation of the humerus into the axilla than any other form of dislocation, and there may be said to be a close analogy between them. A similar method of reducing the former as is used in the latter may therefore with propriety be employed, and the result of this case is a proof of its ready and successful application.

ART. 188.—*On Popliteal Aneurism Cured by Flexion.*

By Dr. TH. MAUNOIR, of Geneva.

(Journal of Practical Medicine and Surgery, and Medical Circular,
October 15, 1862.

In a letter to the editor of the "Journal of Practical Medicine and Surgery," Dr. Maunoir writes:—

"In the month of June, 1857, I was requested by my friend, Dr. Chossat, to visit with him a gentleman in whom he had discovered the existence of aneurism of the popliteal artery; the case, in his opinion, called for active surgical interposition. The patient was a man, aged sixty-one, who for some months had been affected with a gradually increasing and painful tumour in the left popliteal space. A swelling somewhat larger than the closed hand occupied that region a little above its middle: it was the seat of distinct throbbing and expansion, souffle was present, and pressure exercised on the femoral artery over the pubes caused the pulsation, expansion, and souffle to cease, without, however, in any perceptible degree diminishing the size of the tumefaction; no doubt could, therefore, exist as to the nature of the case.

"I remarked, while imparting certain movements to the leg, that the pulsations became less distinct in proportion as I increased the degree of flexion of the extremity, and I ascertained that when the knee was bent to the utmost the throbbing and souffle entirely ceased. This circumstance, which I repeatedly noted, suggested the idea of thus arresting the circulation in the aneurism before attempting any operation. I therefore caused an apparatus to be constructed in the shape of a leather cap, laced at the side in order to enable the surgeon to increase gradually the constriction, and destined to fix the leg and thigh in a flexed attitude; its shape resembled that of the paper which envelopes a loaf of sugar.

"This very simple apparatus was found unendurable by the patient. After two days, he declared that he preferred death to the torture inflicted on him, and especially complained of the necessity of absolute immobility in bed. Being, however, reluctant to relinquish an experiment from which I expected good results, I prevailed on the subject to modify as follows the arrangement of the bandage intended to secure a sufficient degree of flexion of the limb. The entire leg was placed in a sort of long stirrup constructed with a small table-cloth, supported by a strap which rested on the opposite shoulder, and the patient was directed to keep his knee as much bent as possible, to move as little as he could, and on no account to remove the dressing at night. These orders were strictly complied with; he left Geneva, and returned to the country, where he faithfully kept on the apparatus for eighteen or twenty days and nights. In a few days he observed a marked decrease in the pulsations of the tumour, and when the stirrup was removed altogether they had entirely ceased. During the treatment he had moved about in his apartment like a man recovering from amputa-

tion. The tumour gradually diminished in size, and when I again examined the case on the 12th of June of the ensuing year, I found in the popliteal space naught but a hard nodule of the size of a pigeon's egg, in which no throbbing was perceptible. A complete cure had evidently been effected.

"The above is a brief abstract of the case. I make no doubt that Mr. Hart was entirely unacquainted with it, and that he, perhaps, was unaware even of the existence of the *Echo Médical*, of Neuchâtel, in which the fact was recorded in September, 1859, twelve months previously to the publication of his own memoir on the subject. A comparison of dates settled, however, indisputably in my favour the question of priority, and shows that the first cure of a popliteal aneurism by flexion of the limb was not effected in England."

ART. 189.—*On Operations for the Cure of Varicocele and Varicose Veins.*

By Dr. M. H. COLLIS.

(*Dublin Quarterly Journal of Medical Science*, May, 1862.)

In an interesting retrospect of the progress of surgery during the last decade, Dr. Collis makes the following remarks on this subject:—

"Operations for the cure of varicocele and varicose veins are at present in great repute in France and England. The simplest and least dangerous of these are Vidal de Casis', Lee's, Erichsen's, Startin's, Ricord's, and Tuffnell's methods.

"Vidal inserts a pin behind the veins, and a wire in front of them, but through the same apertures in the skin; the wire is passed through holes in either end of the pin, and the two being twisted, the veins are compressed and gradually cut through.

"Lee passes two needles under the veins, and applies the twisted suture for a few days, until the vein is filled with a coagulum between the sutures; he then divides the veins subcutaneously.

"Erichsen substitutes, for Vidal's bar and wire, a simple loop of wire, which he gradually twists until it cuts its way out.

"Startin uses what he terms a bar-needle and clasp, which are convenient for many operations besides those on varicose veins. The bar-needle has a straight shaft and a curved extremity; the latter enables the operator to pass it readily under the vein, the former enables it to compress the vein when passed through. The clamp is a piece of wire with a loop at either end, which acts as the thread in the figure of eight suture.

"Ricord makes use of two loops of hempen thread which are passed in opposite directions—one over and the other under the veins; the ends of each ligature are then passed through the loop of the other ligature, and drawn tight.

"Mr. Redfern Davies and Mr. Tuffnell substitute wire loops for thread; and the latter surgeon adds what he calls 'retracting guides.' These are simply threads of wire which are attached to

each loop, and which enable the surgeon to lessen his compression of the vein whenever he pleases, or to remove the ligature entirely.

"Mr. Davies found it impossible to remove the wire ligatures in one instance, and was obliged to cut them close off, and leave them in the man's scrotum, where they appear to have permanently remained without the patient being incommoded by, or even conscious of their presence.

"All these modifications of metallic ligature are preferable to incision, excision, or caustic, though none of them are free from danger. In operations on varicose veins in the leg, it is advisable to place a pad on the vein above and below the point operated on, so that blood may not lodge there. There is no greater cause of troublesome and dangerous phlebitis than the presence of coagula in the veins. The danger may be reduced materially by the use of compresses; but in no case can operations on veins be considered other than uncertain and dangerous. In varicocele the use of elastic compresses and suspensories, cold douching early and late, and abstinence from the general exciting cause will cure many bad cases, and that with a surprising rapidity. The use of bromide of potassium (if it can be obtained pure) as an antaphrodisiac, in combination with iron, if necessary, is a useful adjunct; and everything should be tried before risking the patient's life by operation.

"If the mortality were not more than one per cent. we should not be justified in letting our patient run even that small risk until all other means had failed. In varicose veins of the leg, the most perfect obliteration will not always cure the ulcers which have called for the operation; and if we knew but all, relapses will be found to occur after ligature of the spermatic veins, not to speak of the possible atrophy of the testis, for which our patient would not thank us. For the leg, a broad band of vulcanized india-rubber tightly encircling the limb below the knee, as recommended by Professor Hargrave, will sometimes effectually compress the superficial veins and drive the blood into the deeper channels, especially in thin subjects, and the plan is unattended with risk and may fairly claim a trial."

ART. 190.—*On the Cochín-China Ulcer.*

By M. ROCHARD, Surgeon-in-Chief to the French Navy.

(*Gazette Hebdomadaire de Méd. et Chir.* May 21, 1862.)

M. Rochard describes a form of ulcer which is endemic in certain parts of Cochín China, and has prevailed extensively among the French troops in that country. Its predisposing causes are the insalubrity of the climate and the consequent anæmia and debility. It is more severe during the rainy season; age, constitution, and race, have no influence on its production. The characters of the ulcer are aggravated among the natives by dirt, skin-diseases, weak constitution, and the want of treatment. There is no evidence to prove that it is contagious; but rather the contrary.

The ulcer always commences with a lesion of the skin, never suddenly; but, in debilitated subjects, the most insignificant wound or

erosion is sufficient to produce it. The lower limbs are always its seat; it especially attacks the ankles, the anterior part of the lower third of the leg, the instep, and the dorsal surface of the foot. M. Rochard has never known it to appear on the plantar surface. It is generally solitary, but sometimes both legs are affected at the same time. The diameter of the ulcer is rarely less than nearly two inches; but sometimes it extends round the legs, and in some very rare cases the whole leg has been involved. The form of the ulcer is irregularly angular. The ravages of the disease are generally confined to the skin and subcutaneous tissue: in severe cases, however, it burrows among the muscles, and produces exfoliation and necrosis or caries of the tendons and bones. In this condition, amputation is the only resource, but is rarely successful.

The progress of the disease is rapid. Under the influence of the predisposing causes already mentioned, an apparently insignificant lesion becomes painful; it is surrounded with a dark red areola, and in a few days there is a large ulcer of gangrenous aspect, from which escapes an extremely fetid ichor. The inflammatory period is accompanied by pains which contrast strongly with the complete insensibility which prevails at a later period.

After a variable time, the ulcer ceases to increase; it becomes clean; an eschar, comprising generally the entire thickness of the skin, is detached, leaving a sanious surface, which is soon again covered by a pultaceous layer. In the most severe cases the disease runs its course, increasing in surface as well as in depth; and finally produces death, unless amputation be performed. In the more favourable cases, after numerous alternations of amelioration and of relapses, cicatrization is established; and, if the patient can leave the country and regain his strength, the cure is permanent. In other cases, again, the disease becomes chronic; and it is in this form alone that M. Rochard has had personal opportunities of observing its character. In the patients under his care at the Brest Hospital, the ulcers presented a depressed, uneven base, traversed by deep red longitudinal streaks, consisting of small anastomosing bloodvessels, having between them yellowish lines of a pultaceous aspect. The edges of the ulcer are callous, as if cut perpendicularly, but irregular; the surrounding skin is wrinkled, the folds radiating towards the centre of the ulcer. There is complete anæsthesia, not only in the parts immediately affected, but also in the surrounding parts, and sometimes even in the whole limb below the ulcer. In one case, the ulcer was seated below the external ankle; and both the dorsal and the plantar surfaces of the foot were insensible; no sensation was produced by the application of the strongest caustics or of red-hot iron. The subjacent muscles are also sometimes paralyzed; this happened in the case just mentioned. No treatment seems successful. Cauterization, with tonics and good diet, have appeared at first to produce the most promising results; but as a rule the disease returns as soon as the patient begins to walk. In one case, where the ulcer was seated on the dorsum of the foot, M. Rochard obtained a successful result by excising the ulcer, and performing partial excision of the foot.

PART III.—MIDWIFERY.

MIDWIFERY AND DISEASES OF WOMEN AND CHILDREN.

(A) CONCERNING PREGNANCY AND PARTURITION.

ART. 191.—*The Principles and Practice of Obstetrics.*

By GUNNING S. BEDFORD, M.D., Professor of Obstetrics in the University of New York, &c.

(Large 8vo, pp. 731. New York and London, 1861.)

This is one of the best works on the principles and practice of obstetrics with which we are acquainted. It is evidently the production of a gentleman who has had considerable experience in the art of teaching, and who has studied this subject carefully at the bed-side. The chief feature in the volume is the strong desire, constantly manifested, to maintain a strictly *conservative midwifery*; in other words, Dr. Bedford loses no opportunity of inculcating a due reverence for the resources of nature, so that the practitioner may not give rise to mischief by unnecessary interference. Although we believe that the maxim "meddlesome midwifery is bad," has led to no small amount of mischief, yet we cannot but feel that great harm is done by ruthlessly setting this maxim aside. Gentlemen who practise turning in all cases of natural labour, or who cruelly resort to craniotomy upon the slightest obstruction to the birth of the child, should carefully study Dr. Bedford's writings. To the student in search of a manual of obstetrics we can strongly recommend this book.

ART. 192.—*On the New Method of inducing Premature Labour at a Pre-determined Hour.*

By Dr. ROBERT BARNES, Lecturer on Midwifery at St. Thomas's Hospital, &c.

(*Edinburgh Medical Journal*, July, 1862.)

However satisfied some may be with the operations of puncturing the membranes; of dilating, or attempting to dilate, the cervix

uteri with sponge-plugs; of separating the membranes from the uterine wall; of injecting water into the vagina or uterus; of administering ergot; it must needs be admitted, that these and other methods are extremely uncertain as to the time they take to effect the object in view. This uncertainty as to time is in itself a serious objection. It entails other objections. Throughout the undefined hours and days during which the obstetrist is seeking to provoke the uterus to expel its contents, the expectant mother is tortured by suspense, and depressed by fear. Her strength, moral and physical, is sorely tried. And when, at last, at some unforeseen moment, active labour sets in, the medical attendant may be absent. Mother and child are thus exposed to unnecessary danger. Nor is the position of the medical attendant a desirable one. He who has commenced an operation for the induction of premature labour is, from that moment, bound by the tie of professional responsibility, and by his personal anxiety, to be at the disposal of his patient until she is delivered. He can undertake no other engagement. This absolute surrender of independent action for an indefinite time is a very serious matter, not only inconvenient to the physician, but entailing danger on his clients. From all this uncertainty, from all these inconveniences, the patient and the physician may be released, Dr. Barnes thinks, by the operation here proposed, and on several occasions successfully performed. Labour may be induced at will, and terminated, if desired, at an appointed hour, with as much precision as to time as almost any operation which the surgeon performs. By adopting this new method, it is just as feasible to make an appointment at any distance from home, to carry out, at one sitting, the induction of labour, as it is to cut for the stone. The operation is brought within the entire control of the operator. Instead of being the slave of circumstances, waiting anxiously for the response of Nature to his provocations, he is master of the position. He determines beforehand, on a survey of the requirements of the case, the time when the patient ought to be freed from the imperilling pregnancy, and may with confidence announce to her the term of her anxieties.

The method pursued, is by no means uniformly simple. It implies a combination of resources. But the primary and all-important point consists in the artificial dilatation of the cervix uteri by the use of specially constructed caoutchouc bags distended with water.*

* The instrument used is of a fiddle shape, having, when distended, a narrower cylindrical central portion, dilating at either end into a bulging or mushroom-like expansion. The object of this is to prevent the bag from slipping forward into the uterus, or backward into the vagina. The bag is prolonged into a long narrow tube with a stop-cock at the end, to keep in the water when injected. The injecting medium is the ordinary Higginson's syringe—an instrument which should always be carried in the obstetric trousseau, as it is useful for many other purposes. Three bags of different sizes are sufficient as a series. To facilitate the introduction of the flaccid bag into the cervix uteri, a small pouch is attached outside, to receive the end of the uterine sound, which, guided by the finger of the left hand, applied to the os uteri, serves to push the bag into the cervical canal. The instruments are well made by Messrs. Weiss, Strand.

The particular steps of the operation are sufficiently described in the case that follows. It is, however, desirable to explain the principle that governs the application of the measures successively called into use. The first condition to be fulfilled is the full dilatation of the os uteri; this may be called the preparatory stage. The second condition is the excitation of the uterus; this may be called the provocative stage. The last step is the expulsion or extraction of the fœtus; this is the accelerative or concluding stage. The first stage is accomplished by a preliminary dilatation of the vagina, after the manner practised by Braun of Vienna. But there is no need of a special instrument. The medium or full-sized caoutchouc dilator made for the cervix answers equally for the vagina. Then, the smallest, or the medium dilator, is introduced into the cervix, care being taken that the terminal bulging part shall pass through the os uteri internum, whilst the inferior bulging end emerges in the vagina. When water is thrown in, the dilator is thus secured by its shape *in situ*, and the eccentric pressure bears upon the whole cervical canal, and especially upon the two points of greatest resistance, the ora externum and internum. This stage ought not as a rule to occupy less than three or four hours. Dilatation is naturally a gradual process, not a violent precipitate one. When the dilatation is complete, it is obvious that the great obstacle to delivery is overcome. If expulsive pains arise, the problem is solved; for the way is clear. But, if pains do not arise, we must excite them. Some uterine contraction may be counted upon, if we draw off a portion of the liquor amnii, and compel the uterus to collapse. The most convenient stage for tapping the membranes is generally before the full dilatation of the cervix. The dilator should be replaced before the liquor amnii has wholly drained away. The retention of a portion is useful as a security to the child, and to facilitate the operation of turning, should this measure become necessary. But, notwithstanding the full dilatation of the cervix, and the rupture of the membranes, expulsive action may not arise. It may, therefore, be necessary to resort to the accelerative measures. These are: the forceps and turning. If the head presents, and the soft and hard parts admit, the long forceps should be applied without any considerable delay. If this instrument be excluded, we have a final and sure resource in turning. But it will often be essential to carry out this ultimate operation by the method of combined external and internal manipulation, which dispenses with the necessity for passing the hand through the cervix uteri, or above the brim of the pelvis, which latter may be distorted.

Dr. Barnes relates four cases in point, of which this is one.

CASE.—I was called in to deliver Mrs. H. of her first child, on account of convulsions complicated with contraction of the pelvis. She was in labour at term. It was necessary to perforate and deliver by the crotchet and craniotomy forceps. In her second labour I was again called in to deliver. This time she was not suffering from convulsions, but the pelvic contraction excluded delivery by any other mode than by craniotomy. In

her third pregnancy, she consented to have labour brought on at seven months. This was done by a combination of ordinary methods, such as the sponge-plug to the cervix uteri, vaginal and uterine douches, ergot, and rupture of the membranes. A living child was delivered after some difficulty, by turning. On this occasion, notwithstanding the successful issue, much time was lost, and risk of failure was incurred through the tedious uncertainty of the methods employed to bring on the labour. The operations extended over several days; and instead of being "master of the position," as I conceive the accoucheur ought to be on these occasions, I was obliged to wait upon Nature until she was sufficiently provoked by our interferences, to permit delivery to be completed.

In Mrs. H.'s next pregnancy I was better prepared. On the 18th February 1861, she being then about seven months gone, I detached the membranes from the orificial zone; on the 19th, the intra-uterine douche was applied, and the caoutchouc bag as used to dilate the vagina. On the 21st, the intra-uterine douche was again applied, and then the elastic dilator was applied for a short time to the cervix. The os yielded somewhat, and I fixed the next day for the completion of the labour. This was effected satisfactorily, by further dilatation of the cervix by water-pressure, and by turning by combined external and internal manipulation. Mother and child again did well.

On this occasion also, notwithstanding the new power I had acquired in the caoutchouc dilator, the process had been unnecessarily tedious. I was not yet satisfied. On the 6th August 1861, Mrs. H. ceased to menstruate. Calculating from this day, she would be 230 days pregnant on the 25th March 1862. When she came to me in January last, I therefore fixed that day for her delivery. Accordingly, at five P.M. on that day, I expanded the vagina by introducing the medium-sized dilator for ten minutes. This also acted a little on the os uteri, which now admitted the tips of two fingers. I then ruptured the membranes: some liquor amnii followed. I appointed to see her again at 7 P.M., and to conclude the labour. At 7 P.M. a good deal of liquor amnii had drained away; but the os was not more dilated, and there were no pains. I passed the medium-sized dilator into the cervix, and expanded it by water. The instrument was left in forty minutes. Examining at the end of this time, I found that it had slipped forward quite into the uterus so that pressure had not been fairly exerted on the cervix. I therefore secured the dilator in its proper situation, and renewed the distension. At 10 P.M. the cervix had expanded to the size of the rim of a wine-glass. I thought this enough to admit the child, which I had resolved to deliver by turning, to pass, as the forceps could not be applied, and the uterus could not be counted upon to contract sufficiently to expel it. Passing the left hand into the vagina, with barely more than the first joints of two fingers through the cervix, I pressed steadily on the presenting head, directing it towards the left iliac fossa, and forwards, whilst the breech was pressed in the opposite direction by my right hand, applied to the fundus uteri externally. In a very few minutes the head was thus put on one side, and a foot, the right, was left over the centre of the os. This was seized and brought down, whilst by consentaneous upward pressure upon the head, above the pubes, version was effected. The child turned out to be larger than I had anticipated from the period of the pregnancy, so that nearly twenty minutes were occupied in the careful traction of the breech through the cervix. This stage I did not hurry, as more complete expansion of the cervix was desirable, to permit the trunk and head to pass rapidly to secure the child's life. The breech being delivered, the pulsation of the cord became almost imperceptible. I then hastened the extraction of the chest;

the extrication of the arms occupied two or three minutes, being impeded from narrowness of space; the head again was delayed two or three minutes, considerable traction being exerted to bring it through the pelvic brim. The child, a girl, larger than her two living children, was born apparently dead; only the faintest pulsation of the heart was felt; that in the cord was quite gone. I tied the cord, and sought to excite respiration by applying a flannel, wrung out of hot water, to the chest. Gradually faint imperfect inspiratory movements were made; the heart beat more strongly, and the cord pulsated. The child was then removed to a hot bath, in which it was partly immersed; the water being dashed at intervals over the chest. By perseverance in this treatment, in about half-an-hour, respiration was, to my great satisfaction, fully established. The placenta caused some trouble from the narrowness of the parts. There was very little hemorrhage. I got home at 11.15 P.M., having kept my engagement, and having expended in all not more than five or six hours in the induction and completion of labour.

This striking result could not have been attained without,—

1. The dilators to expand the cervix, and prepare the parturient canal for the passage of the child.

2. The operation of turning by the bi-manual method.

In conclusion, Dr. Barnes adds :—"The cases above narrate dilustrate several of the most important applications of the new method of inducing and accelerating labour. The perils attending puerperal convulsions, and placenta prævia, may be almost at once terminated by this proceeding. In every case where it is an indication to dilate the cervix uteri, as for the purpose of facilitating the application of the forceps, or the operation of turning, the operation proposed offers a ready means of effecting the purpose.

"A distinguishing merit of the new operation consists in the substitution of gentleness for violence. The *accouchement forcé*, held necessary at times to avert greater perils, may be altogether discarded from practice. There is no longer any excuse for the forcible dilatation of the cervix uteri by the hand,—a proceeding which may lacerate and must bruise the soft structures, and to which I have traced in many cases the origin of fatal pyæmia.

"I anticipate with some confidence, that the method of inducing premature labour now described, will supersede those now commonly resorted to. If it be objected, that the proceeding or the series of proceedings recommended, constitutes an operation demanding considerable nicety of discrimination, and delicacy of execution, I would submit that these are qualities which it is not unreasonable to expect in men who undertake the responsibilities of obstetric practice."

ART. 193.—*The Obstetric Bag.*

By Dr. BARNES, Lecturer on Midwifery at St. Thomas's Hospital, &c.

(*Lancet*, July 2, 1862.)

In a lecture at St. Thomas's Hospital, in which a description is given of the instruments used in operative midwifery, Dr. Barnes

gives an account of his *obstetric bag*, which we doubt not, will interest many of our readers. He also introduces this account with some remarks upon the human hand, as an obstetric instrument, which it would be unjust to our author to omit:—

“And first of all I would say a few words about that most essential and most universally applicable obstetric instrument, the human hand. In ordinary labour of course it is the only instrument required; but it is also the sole instrument called for in many of the greatest difficulties that occur in obstetric practice. In malpresentations—in many cases of contracted or deformed pelvis—in not a few cases where, after craniotomy, the crotchet and craniotomy forceps have failed to deliver—the bare hand affords a safe and ready extrication.

“I believe that if manual dexterity were more cultivated than it is, lives that are now lost would be saved, and certainly many tedious and dangerous instrumental operations would be avoided. It would be both instructive and curious to carry our mind back to the days when the forceps and other obstetric instruments were unknown, and to confront the problem which our predecessors—such men as Ambroise Paré, Guillemeau, and others—had to solve: namely, how to deliver a woman with deformed pelvis without instruments. That they did accomplish in many instances with the unarmed hand what we now do by the aid of various weapons there can be no doubt. If this implies greater poverty of resources on their part, it not less implies also greater manual skill. I am confident that the possession of instruments, especially of the craniotomy instruments, has led within the last century to a neglect of the proper uses of the hands, which is much to be deplored. Indeed, it may be said that the more certain instruments are perfected, the more they will be trusted and resorted to, until we are in danger of greatly exaggerating their value. The question is not merely one of choice between two methods of obtaining the same end; it is frequently one between life and death. The perforator and crotchet, for example, kill the child, where the hand would sometimes save it, and that without adding to the mother's risk. I say it deliberately, after no mean experience in obstetric operations, that what is most wanted at the present day is not the improvement or invention of instruments, but a more careful and scientific cultivation of the powers of the hand, and a judicious selection of the best models of existing instruments.

“Obstetric surgery has this peculiarity: its operations are carried on in the dark, our only guide being the information conveyed by the sense of touch. The mind's eye travels on the fingers' ends. The hand thus possesses an inestimable superiority over all other instruments. Its every movement is regulated by consciousness. If used with ordinary discretion and skill, it can hardly inflict injury.

“After expending a world of ingenuity upon the invention and perfecting of obstetric instruments, it is time to ascend a little the stream of knowledge, and to endeavour to recover from the teaching of our forefathers their secret of *chirurgery*; to regain, if not to

extend, that power over the great instrument which is the surgeon's most trusty aid, and from which he derives his name.

"In providing yourself with a set of instruments, I would recommend you to discard the old rolling-up leather case, or *trousseau*. It is an inconvenient contrivance. It only carries a restricted number of things. I find a modification of the travelling leather-bag far more useful. It will carry not only the selected instruments ordinarily required, but you can always put anything else in it that may be specially indicated. It will hold bottles; serve to bring away pathological specimens. In short, it makes a perfect accoucheur's vade-mecum. And if you turn out the obstetric furniture, you have a travelling bag again. The following is a list of the ordinary furniture of the Obstetric Bag:—

1. A pair of long double-curved forceps.
2. A craniotome, or perforator.
3. A crotchet.
4. A craniotomy forceps.
5. A blunt-ended straight bistoury, with a cutting edge of three-quarters of an inch, to incise the os uteri in cases of extreme contraction or cicatrization.
6. A Higginson's syringe, fitted on my plan with a long uterine tube, which serves for the injection of iced water, &c., to arrest hæmorrhage, and also serves to expand.
7. A set of my caoutchouc dilators, for the induction of premature labour, and the acceleration of labour, as in cases of placenta prævia, convulsions, &c.
8. A flexible male catheter. (The short silver female catheter is often useless, and is generally less convenient than the flexible male catheter.)
9. A pair of scissors.
10. Thread.
11. Some yards of tape.

Medicines.

- | | |
|---------------------------------------|-----------------------|
| 1. Chloroform and inhaler. | 3. Hofmann's anodyne. |
| 2. Laudanum. | 4. Ergot of rye. |
| 5. A solution of perchloride of iron. | |

"The medicines can be fitted in small pockets at the upper part of the bag.

"These are things always kept in my bag ready for use. If you should want anything else, the bag will hold it."

ART. 194.—*On the Mechanism of Labour.*

By Dr. HALAHAN.

(*Dublin Quarterly Journal of Medical Science*, May, 1862.)

In a paper on this subject, read before the Dublin Obstetrical Society, not long ago, Dr. Halahan says:—

"The position in which the head of the foetus enters and passes through the pelvic cavity during labour, has long occupied the

attention of many midwifery practitioners, and given rise to a great deal of discussion. But I am convinced every practical man must allow that the description given by Naegelè is the accurate, and also the only correct one; and that the practitioner cannot, with any degree of truth, contradict the statement that the head, at the full term of gestation, enters the pelvis in the four positions described by him. I shall here briefly enumerate them: the first has the anterior fontanelle directed to the right sacro-iliac synchondrosis, and the posterior one towards the left foramen ovale; the second, is where the anterior fontanelle is, to the left sacro-iliac synchondrosis, the posterior one to the right acetabulum; the third is the reverse of the first, and the fourth of the second.

"I am equally certain that those who pursue the study further, will agree with me in saying, that although the head enters the brim in the before named four positions, yet, at the commencement of labour, when the os uteri is barely beginning its dilatation, the anterior fontanelle is always directed towards either acetabulum or presenting in the third or fourth positions of Naegelè. That the fourth changes, at the beginning of labour, into the first; and the third does not change into the second until the head is distending the perineum; that this is the general course, any other being an exception.

"That to diagnose the position in the first stage of labour is one of the difficulties that the accoucheur has to overcome I am fully aware of. Nothing but constant attention, very extensive practice, together with a delicate touch, will, with any degree of certainty, conquer the obstacles, and make him master of this part of his profession; for, although in theory it seems very easy indeed to be able to diagnose positions, or to say which fontanelle presents at either acetabulum, we find, in practice, it is one of the most difficult points to be perfectly satisfied about, particularly when the head is high up, the membranes entire, and the os uteri not more dilated than to the circumference of a shilling.

"If, then, it is a fact that at the commencement of labour the face is always directed towards the pubes (and I have taken the greatest care and trouble to be perfectly certain, and have fully satisfied myself that it is so, not by the mere examination of a few ordinary cases, but by the most careful and constant investigation of some thousands of patients which I had the opportunity of watching from the commencement of labour until the completion of the second stage), there arises the question, how is it we so seldom find the head in the fourth position when entering the brim, or even in that position when the os uteri is half dilated, but on the contrary, generally discover it in the first? Whereas, in the third, it is the exception for the change to the second to take place until at the termination of the second stage. The simple answer is, that when the posterior fontanelle is on a lower level than the anterior, the change takes place immediately after the accession of labour, or, in other words, when the chin becomes depressed on the chest, or flexion of the head occurs early, which is the case in the presentation of the head in the fourth position. But in the third, we generally find the

anterior one a little lower, or on a level with the posterior, the head being neither flexed nor extended, which prevents the change taking place until the posterior one becomes the lower. This seemingly slight difference in the two makes a very great one in the effect of the uterine action in its efforts to expel the head, and make the change which I shall now try briefly to explain.

"I presume all will allow that the pain or force of the uterus, takes its course in the axis of the pelvis, and that the entire power may be directed effectually, and with as little loss as possible, it is necessary that the occiput should move in the same axis. This is the case in the first and second positions of Naegelè; consequently, if the head enters the brim in either of these positions, we should expect that labour will proceed favourably. If we examine a patient at the commencement of labour and find the head presenting in the fourth position, the posterior fontanelle will generally be the lower or most easily reached by the finger, the anterior one being very high up, and felt with difficulty. This admits of the uterine force having full power on the head, and the change taking place at once. But when the anterior fontanelle is on a level with, or a little lower than the posterior one, the greater part of the uterine force is lost, being divided between the occiput and sinciput. This can only be understood by remembering the direction the uterine force takes, as well as the part of the head it has most power on, as we will there see that when the forehead is the lower part, the pain has not its full effect on the head, but that there is a loss of power. This is the case in the third position, which I think clearly shows the reason that the head enters the pelvis in the second position so rarely. Again, if we find the anterior fontanelle presenting, in fact, midway between the sacrum and pubes, in the third or fourth position, we may naturally expect that the labour will be rather protracted, and the second stage very much prolonged, for the head will, with very few exceptions, be expelled, face to pubes.

"It may very reasonably be asked, is there any practical use in being able to diagnose in what position the child's head is presenting? Certainly there is, the greatest. I shall merely mention two instances. In applying the forceps, we always intend and wish to place the pubic blade over the ear, which will be felt a little to the right or left of the pubes. Supposing, then, you have the instrument correctly placed, is it not of very great importance to know which ear is towards the pubes, as in the first and third positions, we have the ear in the right half of the pelvis; but if, not knowing the head is in the third, we try to rotate as if it were in the first, we bring it out, face to pubes, which is not so favourable as if we had changed it into the second position, the occiput not adapting itself to the hollow of the sacrum in the same manner in which the face does? Again, if version is to be performed in a head presentation, is it not of the utmost importance to ascertain whether the feet are lying towards the abdomen or back of the mother, whereby we may know which hand to use in performing the operation, and this fact can only be ascertained by an accurate knowledge of the position.

"I have put in a tabular form five hundred cases, in which the

head has entered the pelvis, showing the relative frequency of the four positions of Nægelè, taken indiscriminately from the beginning of this year. It will be seen that the first position is the most frequent of all, being 61 per cent.; the third next, being 31·60 per cent.; the fourth next, being 6·40 per cent., and the second least of all, being 1 per cent. That the third changed to the second in every four cases out of five, or nearly so, the proportion being 79·75 that changed, and 20·25 expelled face to pubes. The fourth changed into the first in 84·37 per cent., and continued as it entered the pelvis in 15·62 per cent.

The Ascertained Positions in 500 Cases, 1861.

POSITIONS OF NÆGELE.								
	1st	2d	3d	Primary 3d changed to 2d	Total 3d Position	4th	Primary 4th changed to 1st	Total 4th Position
Total in 500 cases ...	305	5	32	126	158	5	27	32
Per centage	61	1	6·40	25·20	31·60	1	5·40	6·40

“Of the 158 cases in the third position at the commencement of labour, 126, or 79·75 per cent., changed to the second; and of the 32 cases in the fourth, 27, or 84·37 per cent., changed to the first in the progress of the labour.”

ART. 195.—*On Turning in Cases of Disproportion.*

By Dr. ALFRED H. M. MCCLINTOCK, late Master of the Dublin Lying-in Hospital.

(*Medical Circular*, August 27, 1862.)

This paper, which was read at a meeting of the Obstetrical Society of London, embodies the results of seventeen cases which came under the care of Dr. M'Clintock in the wards of the Dublin Lying-in Hospital. In each of them turning was performed, at various periods after the commencement of labour, on account of disproportion between the head and pelvis. In none of these cases was there any considerable deformity of the pelvis, though the obstetric histories of the women clearly showed that there must have been some slight narrowing of the superior strait. More or less difficulty was experienced in every instance in bringing down the head into the pelvis, and twice craniotomy had to be resorted to. On one occasion the parietal bone (that next the sacrum) was fractured in pulling the head through the brim of the pelvis. With one exception, all the patients were deeply chloroformed before the operation of version was undertaken. Nine of the children—viz., four

boys and five girls—survived birth, though all were alive when the operation was commenced. Of the eight children dead born, five were boys and three girls. The heart continued to pulsate for several minutes after birth in some of the children recorded as “dead born,” Dr. McClintock not considering a child as saved by an obstetric operation, nor recording it amongst the “live births,” unless respiration be fully established. All the women recovered satisfactorily but one, who died of puerperal fever, of which some cases had occurred at the time in the hospital.

In reviewing these cases, Dr. McClintock expresses his opinion that the operation is not so favourable for the child as some of its advocates have supposed, and that it is only when the amount of pelvic narrowing is very slight that we can reckon with any degree of certainty upon saving the fœtus. He does not, therefore, recommend the operation in preference to the induction of premature labour in cases where an option was left us, and a decided contraction of the pelvis was known to exist. At the same time that it is a valuable resource in cases of this class which may have reached the full period of pregnancy, he proves by the fact, that of eighteen boys born to the above patients, and delivered by other modes than turning, only two were alive at birth; whereas four out of the nine delivered by turning survived their births.

Looking to the interests of the mother, the author of the paper considers that the operation of turning in the particular class of cases under notice had strong claims; for not only did it abridge the labour process, which in itself was no small advantage, but it averted the possible contingencies of craniotomy, high forceps operation, or even of rupture of the uterus. Its great mechanical advantage, Dr. McClintock thinks, is due, not to the position of the head, nor its greater compressibility when coming through the pelvis with the base foremost, but to the unlimited amount of force which we can bring to the aid of the uterus by traction on the body of the child.

ART. 196.—*On Narrow Pelvis.*

By Dr. FINIZIO, of Naples.

(*Dublin Medical Press*, September 3, 1862.)

Professor Finizio of Naples has written to the *Gazette des Hôpitaux*, asking advice of his French *confrères*:—“He has, he says, in his obstetrical *clinique*, at the present time, four women whose pelves are greatly deformed, their antero-posterior diameter being between only five to seven *centimètres*. One of these women is in her sixth, the others between their third and fourth month of pregnancy. ‘Here at Naples there are surgeons who would, in these cases, allow the pregnancy to arrive at full period, and then perform the Cæsarean operation. I differ from them, and would induce abortion. To relieve myself of responsibility, I called a public meeting for the discussion of the treatment proper in these cases. Young surgeons at the discussion considered one side of the

question only—viz., the saving of the infant. Could M. Pajot be induced to state his opinion? To this request M. Pajot has politely acceded, and writes in the above journal: 'I consider,' he says, 'and almost all accoucheurs in France are of the same opinion, that when the diameter of the pelvis is less than seven *centimètres*, abortion is the only proposable operation. At the full period, when the constriction is under six *centimètres*, I practise cephalotripsy according to my method; that is to say, I commence the operation when the orifice is sufficiently dilated. I repeat the cephalotripsy as often as it is necessary; but I never draw the fœtus downwards (*sans jamais tirer*). Generally, the expulsion takes place spontaneously after the third or fourth operation. I have, however, performed it eleven times in the same case, and the woman has recovered. As for the Cæsarean operation (which belongs to the infancy of art), it should be reserved for those cases where a cephalotribe cannot be passed. Such contractions are extremely rare. In my opinion, to allow a pregnancy of the fourth month to go on to the full period, when the contraction of the pelvis is five *centimètres* is not only bad surgery, but improper conduct.'

ART. 197.—*Hæmorrhage at the commencement of Labour from Hypertrophy and Eversion of the Os Uteri.*

By Dr. MYRTLE.

(*Edinburgh Medical Journal*, July, 1862.)

This case, and the accompanying comments, are from the proceedings of the Edinburgh Obstetrical Society:—

CASE.—On the 11th of December last I was suddenly called to see a lady about the end of the eighth month of her third pregnancy. The two former labours had been natural and very easy. On my arrival at 6 P.M. I found there had already been hæmorrhage to a very considerable extent of a fluid and arterial complexion. There was unwonted depression of spirits, and no small debility; and the labour pains were and had been trifling and infrequent. On examination I found the os rigid and dilated transversely; the membranes thick and very tough; and a spongy villous mass, about two inches in length, and about an inch in thickness, protruding in the transverse diameter of the pelvis. For a time I could not satisfy myself as to the nature of the projecting mass,—now regarding it as a portion of the placenta; then as malignant disease of the anterior lip of the os uteri. For fear of injuring the tender mass, I could not well get my finger between it and the membranes; and then, what inclined me to believe it to be a case of placenta prævia as much as anything, it was anteriorly and firmly girt with a well-defined tight band, having the appearance of the unyielding os, in continuity with the posterior lip, and more than half an inch higher than the adjoining protruding mass, and an inch and a quarter higher than the posterior portion of the tumour.

I waited an hour or more watching matters carefully; and as the hæmorrhage had rather abated, and the pains continued few and ineffective, I determined on giving two large doses of ergot of rye combined with chloroform, which I had often found effectual in reviving from depression, and restoring the normal strength of the labour pains. The doses were ad-

ministered with the interval of a quarter of an hour; and ten minutes after the second, the labour pains became frequent, regular, and strong. The membranes were soon protruded, which I thought advisable to rupture as soon as possible. Shortly after the rupture of the membranes I felt satisfied that the projecting mass was not the placenta, and carefully supporting the anterior lip, I had the satisfaction of finding the os dilating rapidly, the tumour gradually diminishing, while, at the same time, the hæmorrhage continued moderate, and an hour after the first dose of the ergot the child was expelled; everything else went well, save that a great amount of blood was lost throughout compared with the previous labours. Notwithstanding this, I felt anxious for a good many days as to what might be the real condition of the os, though there appeared no constitutional or local symptoms beyond the extra discharge, and its prolonged duration; but my fears were happily unfounded, as the patient recovered well, and continues in the best of health, having neither uneasiness nor discharge. This case brought to my remembrance one I attended years ago, which up to a certain point had some strong points of resemblance, but which turned out to be malignant disease of the anterior lip of the os, in which the strength sunk, the labour pains entirely failed, and the long forceps had to be resorted to, and in a few days a fatal termination was the result. In both, the tumours occupied the same position, were of much the same size,—the strength gave way, pains failed, and the discharge was of much the same complexion and extent; in both, the previous labours were natural and easy.

Dr. Myrtle adds to this account these comments:—"On mentioning the case shortly afterwards to my friend Professor Simpson, he told me he knew of a gentleman who had met with one somewhat similar, and regarding it as a case of placenta prævia, had absolutely torn away the anterior lip of the os uteri. When looking at the case I have endeavoured to lay before you very briefly, there is scarcely room for so much surprise as one might expect at such a diagnosis being come to, as until the pains became strong, the membranes protruded, and the child's head, together with the careful support afforded to the anterior margin of the os, caused the dilatation and attenuation of the spongy bleeding mass, I remained in uncertainty as to its being the placenta; and it was not until recovery appeared complete, that I could disabuse my mind of the idea of its being organic, perhaps malignant disease. There being no appearance of any tendency to varicose veins, I have arrived at the conclusion that it was a case of simple hypertrophy, which, on its development not being accompanied with a corresponding expansion of the external vaginal coat of the os, had caused the tightness and eversion of the inner portion of the anterior lip. Had the case gone to the full time, the progress of the case and the result might have been far from favourable. Delays are often dangerous in our profession as in other things, but when no pressing urgency appears, it is often wise and safe to delay until we see what the "*vis medicatrix naturæ*" can do, whilst we watch and guide her operations to the best of our ability. This case impressed very forcibly on my mind the need of patience when any doubt arises, as the consequences might have been very serious, if not fatal, had I given way to my first impression, and which the *prima facie* view of the

case well countenanced, together with the hæmorrhage so much resembling that in placenta prævia.

ART. 198.—*Protracted Labour from Hypertrophy of the Fætal Kidneys.*

By Dr. KEY, of Arbroath.

(*Edinburgh Medical Journal*, July, 1862.)

CASE.—Mrs. R., æt. 25. Strongly built; dark complexion, but clear; always healthy. On 6th March last (1860), I attended her for an abortion at the third month. She had never been pregnant before. She attributed this abortion to a fright she got, having been molested by a man when coming home one night. The abortion showed nothing of any unusual importance.

12th December.—Saw her at 10 P.M. She had been uneasy during the day; no actual labour pains, but an approach thereto. Membranes had ruptured two hours before I saw her. On examination, I found the os dilated to the size of a shilling; not particularly rigid; evidently an abnormal presentation. My finger reached a soft surface, and passed into a fold, either the axilla or groin; passing my hand backwards, I reached with difficulty what I supposed to be the anus. The sphincter was relaxed and did not grasp my finger; on withdrawing it, I found it covered with meconium, which tended to confirm my diagnosis. I left, telling them to call me when required. The patient told me that she was not at the full time. Her husband is a shipmaster, and, after her abortion in spring, went to sea, only coming home in end of April.

13th.—Called at 4 A.M., found pains considerably stronger, but not acting much on os; remained an hour, and then left. To have a dose of castor oil. All day she remained much in the same state, pains irregular and ineffective. She was quite cheerful, had no headache or sickness, and took a little food. I was not required until I called on Friday forenoon, when I found that the pains had greatly diminished during the night, and that she had slept for some time. Oil had acted freely.

14th.—To-day, towards afternoon, the pains increased in strength and frequency, and apparently the labour was to go on energetically. The os dilated to the size of a penny. I could feel the scrotum and penis, the child's abdomen being towards the abdomen of the mother; the left hip presenting. About 11 P.M. the pains again went off, becoming quite useless. There was still no necessity for any interference, the patient remaining free from any constitutional irritation; I left her to herself. She had a restless night; no sleep; pain often very strong, but not continuous.

15th.—Much in the same state all day. Had again castor-oil. No progress made of any consequence. 10 P.M. Tired and worn out. Very sleepy; pains are very annoying. R. Sol. mur. morph. ʒj. aquæ ʒj.; half to be taken just now, and the other half in an hour if sleep do not follow." The whole was taken as directed. She slept soundly and quietly until 8 A.M. on Sunday morning.

16th.—The pains gradually began again at 11 A.M., and steadily increased in strength. At 2 P.M. I saw her, and resolved to remain with her. There was no motion in the child, and the mother had not felt any for at least two days. Scrotum and penis considerably swollen. The pains continued

to be strong and expulsive, and at 4 P.M. the os was fully dilated; still there was but little appearance of the breech making any progress. As the child was apparently dead, there could be little harm in bringing down the left leg, the one I could reach; and, at any rate, were it alive, this would not much affect its chance of life. After considerable difficulty I succeeded in my efforts, and expected to have the control of the labour. I found it of no use; the breech obstinately refusing to move. The appearance of the leg told me that the child had been dead some days. I could only reach the other foetal groin with the point of my finger, high up at the brim of the maternal pelvis; and the little traction I could use on it never moved it. No amount of pulling on the extracted leg had any effect. I gave a dose of ergot, as the pains had flagged considerably. Although this produced strong expulsive pains, no progress was made. It was evident that nature had done all she could. I therefore sent for my friend Dr. David Arrott, and determined to extract the child. A blunt hook was passed over the right groin. I used a very great amount of force before any impression was made upon the child, and just as the femur gave way under the force, the leg came down. But our difficulties were not over. We had certainly both limbs down, but the right femur was fractured; and, from the former traction, the tibia of the left leg had separated from the femur, leaving four inches of merely soft parts at the knee-joint where no such four inches should be. We were half an hour in completing the birth. After the breech was fairly over the perinæum, the child turned without any assistance: the face going towards the sacrum. We succeeded in extracting without evisceration. The abdomen of the child was greatly enlarged; it was otherwise normal and well grown. I regret that I did not weigh it or take the circumference of its abdomen. On opening it, we found a quantity of serum (say, one pint) in the abdominal cavity, but its great size was found to depend upon enlargement of the kidneys; both were of same size. I was allowed to remove one of them (the right). I could not have said which was largest. On taking it home, it weighed $11\frac{1}{2}$ ounces:—the adult normal kidney only weighing $4\frac{1}{2}$ or 5 ounces.

17th.—Mother doing well; has had a very good night. 21st.—Improving very satisfactorily.

ART. 199.—*On Impracticable Labour from Occlusion of the Os Uteri.*

By M. MATTEI.

(*Journal of Practical Medicine and Surgery, and Medical Critic*,
October 22, 1862.)

After a few historical remarks, the author relates the cases which have fallen under his personal observation, and mentions the particulars of forty other cases, which have been published by various obstetricians. From these data he draws a general description of the disease, and concludes his memoir as follows:—

The complete occlusion of the orifices, or cavity of the os uteri, may result from the effects of local inflammation, but in most instances (nineteen out of thirty-one), it is the consequence of the organisation of the plastic deposits which occupy the neck of the womb during gestation.

This obstruction seldom prevents pregnancy from reaching its natural term; it may even sometimes delay parturition, and manifest its presence only at the beginning of labour. It can be detected by examination *per vaginam* only, and if the insertion of one or two fingers is sufficient for the purpose of diagnosis, the entire hand must gradually be introduced.

The obstruction is sometimes of so compact a character as to resist all the efforts of nature to overcome it during labour; this was observed in thirty-six out of forty-two cases, and three women out of the same number died undelivered. When some delay in the necessary interference occurred, the death of the child was often the result; seven children thus died out of twenty-eight, and twice in twenty-nine instances the mother also perished.

The methods hitherto resorted to for the removal of the impediment to parturition consist in laceration with the nail, or female catheter when the density of the obstruction is moderate, and in the contrary case the knife or scissors are used.

The bistoury is the instrument most commonly employed, but as the surgeon has seldom the advantage of being aided in his proceedings by ocular inspection, and as the tissues to be divided are highly vascular, hæmorrhage is to be apprehended, and the angles of the wound may, moreover, during the efforts of labour give way, and thus dangerously increase the extent of the laceration; it must further be remembered that the head of the fœtus rests upon the very parts acted upon by the knife, and are more or less exposed to injury; for these various reasons the bistoury must be used with the utmost caution.

It will, therefore, often be preferable to discard the sharp instrument for the common conductor, the point of which should be firmly applied, during uterine contraction, to the most dependent part of the tumour, or to the os uteri if its exact situation can be ascertained. M. Mattei, who believes he is the first who has advocated this plan, conceives that an aperture may thus be drilled through the uterine textures, and that the dangers inseparable from the use of the bistoury may thus be averted.

ART. 200.—*Undescribed cause of Delay in Labour.*

By Dr. JAMES SIDEY.

(*Edinburgh Medical Journal*, September, 1862.)

At a recent meeting of the Obstetrical Society of Edinburgh, Dr. Sidey gave the history of a case of tedious labour that had lately come under his consideration, where the presentation was natural, and the pelvis of ordinary dimensions, but the head remained many hours impacted in the brim before the pains succeeded in forcing it through. After the birth of the child, he had found the face to be unusually broad; and on comparing it with the measurements of some other infants of normal dimensions, he had found it to measure, from one malar protuberance to the other, fully

a quarter of an inch more than the largest of the others. He had not been able to meet with any notice of this increase in the size of the malar bones as a cause of delay in labour; but if attention were directed to the subject, it might prove to be a more frequent cause of tedious labour than at first sight we might imagine.

ART. 201.—*Parturition without Pain.*

By Mr. JAMES TOWNLEY.

(*Lancet*, May 24, 1862.)

Mr. Townley advocates the use of a peculiar inhaler, and of an anodyne mixture in place of pure chloroform. He also makes some remarks upon the mode of administering this mixture:—

“The inhaler is similar to one very commonly used in administering chloroform. It has, however, in addition, two tubes, an inch and a quarter long and a quarter of an inch in diameter, running parallel to the floor of the inhaler. These tubes, being placed above and to the sides of the inspiring valve, admit two small streams of fresh air, which to a great extent are inspired unmixed with the vapour of the anodyne. In the place of the grating there is a curved prong for retaining the sponge under the right tube and opposite the hole in the right side connected with the cup which receives the mixture to be inhaled. The object of this cup is—first, to receive the mixture, and direct it to the centre of the sponge. It has, in the second place, the advantage of helping to keep the inhaler cool by the patient making use of it to rest her thumb upon when she is inhaling. It will therefore be gathered from this that the patient herself always holds the inhaler.

The anodyne mixture which I have found to be the most manageable is composed as follows: Alcohol, two ounces; one drachm of aromatic tincture; with sufficient chloroform added, short of the production of a turbid state of the fluid. The object of adding the tincture is to make it pleasanter to inhale; the spice also appears to prevent the sickness which would otherwise sometimes arise from long-continued inhalation. By giving a little colour to the mixture, also, it prevents any accident that might arise by putting in by mistake pure for the modified chloroform. I prepare the aromatic tincture as follows: One drachm of nutmegs; two drachms of cloves; pterocarp chips, a drachm and a half; water, four ounces: alcohol, five ounces: mix.

Mode of administering the anodyne vapour.—The great object to be attained is to so far influence the nerves of sensation as to prevent pain, and yet not carry the anæsthetic agent to the extent of producing unconsciousness. This can be effected in the following manner:—The woman, in the upright or recumbent position, as the case may be, holds the inhaler in her right hand. She is then directed to take a full inspiration, and to apply the inhaler to the mouth and nose. She is then to breathe rapidly for six, eight, or more inspirations (the inspirations and expirations being equal) only with the

diaphragm and abdominal muscles, the chest being kept a fixture all the time. The inhaler sound should then be removed immediately, and one or two full, deep, quick chest-inspirations taken. This will be found sufficient to relieve all pain, and there will be no loss of consciousness. During the entire process it is desirable to have a full light upon the face, to watch the countenance and feel the pulse occasionally, and observe the pupils. These, in some cases, are very quickly affected, and then the inhalation requires to be suspended for a time. During the time the process is going on, I am in the habit of giving a teaspoonful of brandy in a cup of weak tea with plenty of milk, and something to eat; or, instead, a glass of wine and a little cake or bread-and-butter, from time to time, to keep up the strength and prevent that sudden pallor of the face which sometimes occurs. I may add, as only a portion of the alcohol is taken up in vapour, it accumulates in the sponge, so that it is necessary occasionally to squeeze it out before adding a fresh quantity.

I can hardly attempt to explain clearly the *modus operandi* of the agent. Practically, however, it answers the purpose intended. The great point is, of course, to arrest its action before it produces unconsciousness. This is effected by using it as I have described. It is requisite that the patient be carefully watched, so that the moment for administering the agent may be seized. From the experience I have now had of its use, I can estimate pretty accurately the exact time the inhalation should be resumed or discontinued. After a little practice this knowledge can be obtained by any competent observer. I have now given my anodyne mixture in 216 cases, and without in any one instance seeing a bad result *quoad* the administration of the mixture. Of these cases many have come to me in consequence of the severity of their former labours, their extreme nervousness, and other causes.

ART. 202.—*Transfusion employed successfully in the Case of a Newly-delivered Woman.*

By Dr. WEICKERT.

(*Deutsche Klinik*, 7 Jul. 1862; *Gazette Hebdomadaire*, 8 Août.)

CASE.—The patient was a woman aged 43, exhausted with *post-partum* hæmorrhages which nothing could arrest: the pulse was hardly perceptible, the eyes were glazed-looking, and death was obviously imminent. The operation was performed in the manner recommended by Martin: one peculiarity of it was that, owing to the first person from whom blood was taken fainting, it was necessary to take more blood from a second individual, and thus two different bloods were supplied to the patient—a circumstance which is unique in the history of the operation. All this delayed the affair considerably, nevertheless the transfusion was completely successful, and the patient made a good recovery. The great obstacle to the progress of the operation was the frequent coagulation of the blood, not only in the injecting syringe but even in the basin into which it was first received. The editor of the *Gazette Hebdomadaire* points out, however, that the very care taken by M. Weickert to keep up the temperature of the blood would tend to aid, instead of delaying, this coagulation. In proof of this we are referred to the

experiments of Hunter, Hewson, Scudamore, and Davy. One other point in the case is worthy of notice as regards the danger of phlebitis which has been supposed to beset the operation of transfusion. The left median vein was that into which the blood was injected; it had been bared of all extraneous tissue for the space of more than half an inch, an opening was made into it with a trocar, by means of which the canula was introduced. At the commencement of the injection the canula slipped out; the operator, therefore, laid bare a larger extent of the vein, and placed a ligature round it, by means of which he compressed the vein tightly against the canula. Notwithstanding this rough treatment not a vestige of phlebitis followed the operation; a fact which seems strongly to militate against the old notion of the great irritability of the inner coat of veins.

ART. 203.—*Illustrations of Puerperal Diseases.*

By R. UVEDALE WEST, M.D., Vice-President of the
Obstetrical Society of London, &c.

(8vo, pp. 84. London. 1862.)

This practical work may be read with advantage by every practitioner of midwifery. It contains the full details of seventy-one examples of various puerperal diseases, derived from a practice extending over twenty-eight years. During this time 3200 cases of midwifery have been attended by the author, who has preserved notes of all the puerperal accidents and diseases which have fallen under his observation. Having found that these definite records were a very useful resource in present doubts and difficulties, Dr. Uvedale West thought that they might also be of service to his brother practitioners. We believe that this opinion is well-founded, and therefore consider that the profession is under an obligation to this gentleman for the timely publication of his *Illustrations*.

ART. 204.—*Purulent Puerperal Peritonitis, caused by Paracentesis.*

By M. J. DE LAPLAGNE.

(*Gazette des Hôpitaux*, lxiv. 1861.)

CASE.—A woman, aged 24, who had been safely delivered of her second child, at full term, but who had left her bed the next day, was seized on the third day with rigors, fever, and general uneasiness. Laplagne found her lying on her back, with the head raised, and the thighs flexed on the belly. She complained of aching under the eyes, and of severe pain in the belly on the slightest touch: the countenance was anxious, breathing hurried and superficial, pulse small and rapid, skin dry and hot. The uterus was large, and the lochia were suppressed: there was frequent vomiting of a green matter, great thirst, constipation, and only a small quantity of high-coloured urine was passed. Fifteen leeches were applied, and mercurial inunction to the belly was ordered, with calomel and ipecacuanha internally. On the twelfth day all the symptoms had increased, and the belly was enlarged. On the fifteenth day pleurisy of the right chest set in. On the thirty-fourth day the chest symptoms had subsided, but the belly was still tympanitic and somewhat tender: when suddenly a shivering attack came on, with coldness

of the extremities. The belly swelled considerably and became very tender; the shiverings recurred, and on the forty-fifth day the peritoneal effusion had distended the belly as greatly as pregnancy at full term would have done. The belly was everywhere dull on percussion and fluctuating: and to save the patient's strength Laplagne preferred puncturing to leaving the pus to find its own way through the abdominal walls. A large quantity of laudable pus was evacuated, and great relief was felt. On the following day a further *spontaneous* opening near the umbilicus took place, and a quart more pus was evacuated on pressure: recovery rapidly followed.

ART. 205.—*On the Treatment of Puerperal Fever by Sulphate of Quinine.*

By Dr. CABANELLAS.

(*L'Union Médicale*, and *Medico-Chirurgical Review*, July, 1862.)

In a paper presented to the Académie Impériale de Médecine, Dr. Cabanellas proposes to treat puerperal fever by the administration of the sulphate of quinine. He states that it has been successful in seven cases in which he employed it, and that he is convinced of its efficacy when it is used in isolated cases and at the commencement of the symptoms; and he has reason to hope that it may prove efficacious in epidemic visitations of the disease. He attributes the efficacy of the treatment in great measure to the mode of administration, to which therefore he directs special attention. All the seven cases which were treated were characterized by intense feverish excitement, tension and pain of the whole abdomen, or merely great sensibility on pressure over one or other ovary, and in two cases nausea and vomiting. In six of these cases he began by giving some ipecacuan, and after having applied emollient poultices over the abdomen he waited until the temporary relief afforded by the emetic was succeeded by the return of the general and local symptoms. The day, or the second day, after the administration of the emetic he gave the quinine, in the dose of ten or fifteen centigrammes every hour day and night, with the most scrupulous exactness, even recommending that during the first forty-eight hours the sleep should be disturbed, so as not to lose a single dose. At the same time the poultices were continued, emollient enemata were injected, if necessary, and the patients drank acidulated fluids when they were thirsty. At the end of twenty-four hours the patients generally complained of some singing in the ears, but the quinine was hardly ever vomited, and the pulse began to fall. The improvement was more and more marked every day; the local symptoms were gradually relieved; and in a few cases the patients asked for broth and other kinds of nourishment on the third day of the disease. These requests were granted, without interrupting the administration of the quinine every hour, but in proportion as the symptoms became more favourable the sleep was allowed to continue without interruption, though on the express condition that the medicine should be given as soon as the patients awoke. The singing in the ears, the deafness, and a little vomiting do not contra-

indicate the continuance of the remedy; and Dr. Cabanellas has never observed these symptoms to be attended with bad consequences, and they moreover disappear as soon as the doses are discontinued or given at more distant intervals. When the absence of the feverish excitement has lasted four or five days, if the local symptoms are almost removed, the doses are given less and less frequently; and if the improvement continues, the medicine is no longer given. On two or three occasions it was necessary to return to the first doses after they had been suspended, and once the quinine was resumed in larger doses than at first. In the cases which were observed, the cure took place after a variable interval of from five to fifteen days. The sulphate of quinine appeared to Dr. Cabanellas to be equally serviceable in arresting the fever and diminishing the local symptoms in a case of phlegmasia dolens which supervened in the lower limbs of a female recently confined.

ART. 206.—*On the Internal Surface of the Uterus after Delivery.*

By Dr. J. MATTHEWS DUNCAN.

(*Lancet*, May 17, 1862.)

In this paper (which was read at a meeting of the London Obstetrical Society) it is proposed to show that in the modern discoveries as to the true condition of the decidua or mucous membrane of the uterus in early pregnancy is a great acquisition for physiological science and for practical medicine, the completion of our knowledge of the condition of the same part in the end of pregnancy and after delivery is equally, if not more valuable. Our understanding it thoroughly will contribute greatly to our comprehension of various *post-partum* diseases, and especially of the heterogeneous aggregation included under the name of puerperal fever. In regard to both of these subjects, the writings of William Hunter have been grossly misinterpreted. Errors which his brother John had introduced have been attributed to him, while a careful scrutiny of his writings show that he held and taught, though in an imperfect manner, the modern and undoubtedly correct views regarding the decidua of early pregnancy, and the state of the mucous membrane after delivery.

Cruveilhier is the anatomist on whose authority most modern authors rest, asserting that after delivery the whole internal surface of the body of the uterus is left, like an amputation stump, a bare muscular surface, and that healing is effected after a process of suppuration and granulation. This theory is quite inconsistent with physiological and pathological laws, and with the known facts regarding the uterus and the lochia. Heschl accepts the statement of Cruveilhier regarding the denudation of the muscular fibres of the uterus, and only suggests a new theory explanatory of the mode of healing of the surface. Dr. Matthews Duncan maintains that at no time is the muscular tissue laid bare; that a layer of mucous tissue is left everywhere covering the proper muscular

structure; that, as the uterus diminishes in size, the mucous tissue increases in thickness; and that healing takes place by a process analogous to that followed by the skin or any mucous membrane denuded of its superficial portions. He has particularly to point out that this is true of the placental site, in which the persistently open uterine sinuses, after a rich mucous membrane is evident, show that no new membrane is formed over the old placental surface, as Cruveilhier and Heschl imagine, but that the remains of the decidua serotina reconstruct a new mucous membrane.

The author alludes to the valuable contributions to our knowledge of this subject from Priestley and Robin, and comments on the ignorance or neglect by the latter of all but French observations on this subject. He does not agree with the opinion of Robin, adopted by Priestley, that the old uterine mucous membrane is detached about the middle of pregnancy, and a new one then begins to be formed. This notion is quite inapplicable to the placental site; it is quite in opposition to the fact that at no time is the internal surface of the uterus found denuded of mucous structures, and no sufficient observations are adduced on which it could be founded.

The new views regarding the internal surface of the uterus after delivery are in accordance with all the other known facts on this subject, especially the absence of inflammation, and the nature of the discharges after healthy delivery.

ART. 207.—*Case of Unsuspected Pregnancy and Labour.*

By Dr. TANNER, Assistant-Physician for Diseases of Women and Children at King's College Hospital, &c.

(*Proceedings of the Obstetrical Society of London, and Lancet, May 7, 1862.*)

CASE.—Dr. Tanner was sent for on Thursday morning, the 17th ult., at nine o'clock, to see Mrs. J., 42 years of age, who had been suffering great pain in the abdomen since eleven o'clock on the preceding night. The patient stated that she had been married rather more than three years, and that she had never been pregnant. The catamenia were last on some time in June, 1861, but as they had been very scanty for five or six months before, their cessation was attributed to the "change of life." The abdominal pain came on in paroxysms; it had been unrelieved by medicine and a mustard poultice; and the assistant of a surgeon in the neighbourhood had pronounced the suffering to be due to flatulence and inflammation. This opinion coincided with that entertained by the patient, as well as with the views of the husband, mother-in-law, and a married sister, who had been sitting up with her. On examination it was found that the lady was in labour, the membranes being ruptured, the os uteri dilated to the size of a crown piece, and the head of the fœtus entering the brim of the pelvis, with the vertex presenting. In a few hours Dr. Tanner effected delivery with the forceps, the child (a female, arrived at maturity) being born with animation suspended; it was, however, restored by the persevering use of artificial respiration, to the gratification of the astonished parents. This case serves to establish as a fact—that a woman may conceive, may go to the full term of gestation, and may be in labour for ten hours, without having any suspicion that she is pregnant.

ART. 208.—*Case of Double Uterus, with Simultaneous Gestation.*

By Mr. GRACE.

(*Medical Circular*, July 2, 1862.)

This case was brought before the Obstetrical Society of London, by Dr. Graily Hewitt. It is, as Dr. Hewitt said, a very unusual and interesting one, there being only two like it in the elaborate work of Kussmaul, on Malformations of the Uterus. In this, and apparently in all cases of double uterus, there is a marked disposition to premature labour or abortion, with feebleness of the uterine pains:—

CASE.—Mr. Grace was summoned by his father to see a patient in labour for the fourth time, aged twenty-six. Twice previously there had been premature birth; the third child did not live. When first seen by Mr. Grace, labour had been going on for fifteen hours; the waters had escaped. On examination, a hand was found presenting in the vagina, and the os about half dilated; but lying posterior to this another os was discovered, with the head of a child presenting. Septum between the two, half an inch thick, and extending up as far as could be reached. The anterior os was dilated, the child turned, and delivery effected. The placenta then followed. The child was dead, and apparently seven months old. The posterior os was next dilated, turning effected, and a live child extracted, which survived only a few hours. The placenta of the second child was expelled without difficulty. Both children were females, equal in development. No flooding or other complication interfered with the perfect recovery of the patient.

ART. 209.—*On the Diagnosis of the Sex of the Fœtus.*

By Dr. STEINBACH.

(*Schrift für Geb. Kunde*, xviii., p. 428.)

Observations by Steinbach, on fifty-six pregnant women, have established the truth of Frankenhauser's statement, that it is possible to determine the sex of the fœtus by the character of the heart-sounds; for in only 13 cases was any error of diagnosis made. A number of observations, however, are necessary in order to avoid fallacy. Observations, extending over a month or more previous to delivery, establish the fact that it is not true, as some have supposed, that a regular diminution in the frequency of the pulse takes place coincidently with the development of the fœtus. Steinbach found that the average frequency of the pulse in males was 131, in females 144. As to the question whether this relative frequency in the pulse of the two sexes is maintained after birth, he declares that, having attempted to make observations on this point, he gave them up in despair, from the number of circumstances which destroy the value of such investigations. It is highly necessary, in examinations to determine the foetal sex, to avoid, on the one hand, a constrained position in listening, seeing that this might easily induce auditory hallucinations. On the other hand, it is of great importance

that the woman should not lie in an uneasy attitude, else the gurgling of the intestines, the laboured respirations, and, perhaps, the increased *uterine* sound, may interfere with that of the foetal heart. Again, the reflex movements of the foetus, excited by the pressure of the stethoscope on the belly, may be a source of embarrassment which continues for some minutes. Again, the frequency of the pulse may vary from causes connected with the foetus or the mother with which we are as yet unacquainted. The sudden appearance of the bruit of the umbilical cord may derange all our counting, and also induce great changes in the frequency of the pulse. The variation, and still more the sudden change, of the maternal heart-sounds, of such a kind that first one heart-sound, and then both, become more marked, and which is not unlike the unrhythmical contraction, may force us to begin our counting entirely anew.

ART. 210.—*Circumscribed Tumefaction in the Sterno-Mastoid Muscle in New-born Infants.*

By Dr. MELCHIORI.

(*Annali Omodei*, p. 630, and *Schmidt's Jahrbücher*, No. 5, 1862.)

Dr. Melchiori calls attention to the occasional existence of a peculiar affection in new-born infants—viz., an induration of the sterno-mastoid muscle, of which he relates four instances. Shortly after birth, the child is perceived to have difficulty in making certain movements with the neck, and to suffer more or less pain in doing so. On examination the presence, in the thickness of the sterno-mastoid, of a tumour is detected, spindle-shaped in form, and sometimes of considerable size. The affection at first appears inflammatory, and emollients are useful, afterwards it is necessary to trust to nature. Melchiori cannot assign any special cause for the affection, but he conjectures that it may be due to compression of the muscle, and rupture of some of its fibres during accouchement. The editor of the *Gazette des Hôpitaux*, in commenting on these cases, announces that he has observed a similar one recently, in the practice of M. Dolbeau, at the Hôpital Saint Louis.

ART. 211. — *Statistics of Twins.*

By Dr. J. SPAETH, of Vienna.

(*Zeitschr d. Ges. d. Aertze zu Wien*, and *American Medical Monthly*, April, 1862.)

Among 14,880 deliveries in the hospitals of Vienna occurred 185 twin-births, or one in eight. In two cases two amnions presented themselves. Three times the after-birth of the first child came away before the other was born. Strict attention was paid to the following points:—

1. *The Condition of the After-Birth.*—One hundred and twenty-six cases examined. Two separate placentæ, two chorions, and two amnions, in 49; united placentæ, two chorions, two amnions, in 46;

united placentæ, one chorion, two amnions, in 28; united placentæ, one chorion, and one amnion, in 2. United placentæ retained, very frequently, traces of a line of demarcation, with double as well as simple chorion. There was never any indication that a single chorion had been formed by the union of two. Where two chorions existed, the vessels of the two cords had no communication with each other; in all cases with one amnion, and more than one-half of those with one chorion, these vessels formed superficial but well-marked anastomoses from one side to the other, either between the veins alone or between the arteries also. In one case the artery of the one fœtus anastomosed with a vein of the other. In such cases the second child may bleed to death through the cord of the first-born, if that cord is not tied.

2. *Sexual Condition of the Children.*—In less than one-third of all cases the children were of different sexes. Twins with united placentæ and united chorion are always of the same sex; under other conditions they may be so.

3. *Degree of Development in Twins born alive.*—In 108 of 176 cases premature delivery took place; in three, abortion about the sixth month; only 62 pairs reaching the full term. Usually, the children were found of unequal size. The first-born was the largest 29 times in 62; 13 times in 28 mature, and 16 times in 34 premature twins.

The largest pair measured $13\frac{1}{2}$ and $13\frac{3}{4}$ inches around the head, 19 and $19\frac{1}{4}$ inches in length; the smallest mature pair, $11\frac{1}{4}$ and $12\frac{3}{4}$ inches around the head; $16\frac{1}{4}$ and 18 inches in length—proving that twins may reach the normal size of single children born at full term.

4. *Vital Relations of the Children.*—In 176 out of 185 cases, both children were born alive; in 8 cases, 1 was dead; in one instance, both. In 4 cases of the 8 with a dead child, no cause of death could be ascertained; in 3 of the remaining 4, the fœtus died from torsion of the cord, and one in consequence of fibrinous deposits of the placentæ.

5. *Development of the Ovum.*—In a case with united placentæ, but two chorions, the uterine surface of the one placenta was covered with numerous calcareous concretions; the other normal. Several other cases exhibited a similar condition in regard to fibrinous exudations. Of two embryos enveloped in one chorion, one perished about the fifth month, in consequence of induration of the placenta, while the other continued in its normal development. Such differences occur even where the two umbilical arteries communicate with each other. In one birth, the first-born child was well developed and living; the head of its mate had to be perforated on account of hydrocephalus, and the body showed extensive malformation; double hare-lip, cleft palate, atrophied eyeballs, club-feet, one radius and thumb, as well as stomach and spleen deficient, &c.; still these two children had a united placenta, a common chorion, and anastomosing umbilical veins. With numerous anastomoses and one chorion, one fœtus may perish without impediment to the normal development of the other. Cr  d   seems therefore to

be correct in saying "each fœtus has a separate existence independent from that of its mate."

6. *Superfecundation and Superfœtation*.—It is now pretty generally admitted that gestation with twins arises from the fecundation of either two ovules (from one or two Graafian follicles, or may be even from the two ovaries) or of one ovule with two germs. In the latter case only one chorion (though occasionally two amnions) will be formed, the placentæ unite, and the children are of the same sex. Impregnation of two ovules results in the formation of two sets of membranes; the placentæ uniting, if the ovules are located near to each other in the womb. In either case, one copulation may be sufficient. It must be admitted, however, that two ova, with separate chorions, may possibly have been fecundated at different times. There is no proof that this causes the differing size of twins, as those evidently developed from two germs in one ovule present in this regard as much difference as the others.

ART. 212.—*Cases of Extraordinary Fecundity.*

By Dr. WARREN.

(*Philadelphia Medical and Surgical Register*, and *Dublin Medical Press*, June 25, 1862.)

In a paper read before the Boston Society of Medical Improvement, Dr. Warren relates several cases of this kind. Before doing this, he says that many years ago, while travelling in England, a house was pointed out to him in which it was said were then living five children born at one birth.

"Ambrose Paré, who may be believed when he quotes from his own experience (lib. 25th, cap. 3rd), states that in his time, in the parish of Seaux, near Chambellay, there was a noble family of the name of De Maldemeure. The wife of the last lord of Maldemeure gave birth, within a year after her marriage, to twins; the next year she had three children; the third year, four; the fourth year, five; and the fifth year, six. In this last labour she died, and of the six children one survived, and is now lord of Maldemeure.

"Another case of six children at a birth is copied from the *Gazette Médicale* into the *American Journal of Medical Sciences* (vol. xii., for the year 1833). 'On the 30th of December, 1831, the wife of a man named Dernian Ploson, living in the village of Dropin, in Bessarabia, was delivered of six daughters (the fruit of one pregnancy) all living, and only a little smaller than the usual size of children at birth, with the exception of the last, which was much the least. The mother is not quite twenty years old, and is of a strong constitution. The whole six children lived long enough to be baptized, but died on the evening of the day of their birth. The mother suffered from a severe indisposition subsequent to her confinement, but is now quite well.'

"Dr. Garthshore (*Phil. Trans.*, b. 77, 1787) reported a case which occurred in the practice of John Hull, surgeon. On the 25th of April, 1786, Margaret Waddington, a healthy woman of twenty-one

years, gave birth to five girls. Of these, two were alive, but soon died; one was but recently dead, and the other two were putrid. There were five distinct sacs and cords, but the five placentæ were so fused together as to appear but one. The portions of placentæ belonging to the two putrid children were also slightly putrid.

"Dr. G. states that in the *Commercium Literarium Norimbergense*, for the year 1731, two cases are reported of five living children at one birth. Of these cases, one occurred in Upper Saxony, the other near Prague.

"Dr. G. also states that two foreign medical men, whom he had met in London, related to him cases of five children at a birth, which were said to have occurred near Ghent and near Paris. Of these cases he heard nothing more, and felt in doubt as to the accuracy of the report.

"In the list of births recorded in the *Gentleman's Magazine*, two cases are given of five children at a birth. The first occurred October 5, 1736, in a dairy-cellar, in the Strand, London. Three of the children were boys. The other case occurred in March, 1739, at Wells, in Somersetshire. The children, four boys and one girl, were all christened, and reported likely to live.

"Two or three of the following cases are quoted from Dr. Paul F. Eve's curious and interesting work of 'Remarkable Cases in Surgery':—

"(*American Journal of Medical Sciences*, vol. iv. 1829.) Case of five children at a birth, furnished by Dr. Weiss, and communicated to the clinique by M. Carus. A woman, twenty-seven years of age, of medium stature, who had been married five years, after having given birth to twins two years before, was put to bed with five children. The regular period of pregnancy was past, and nothing in particular occurred, except that the woman felt herself more feeble than usual, with less inclination to eat and sleep. The abdomen had been very much distended, especially on the right side. Movements had been felt, chiefly on the left side. The birth of the first child was very easy, and took place soon after the formation of the watery sac. The others came more slowly, and the last was much the most difficult birth. Each was enclosed in a separate sac, and was immediately followed by its particular placenta. All were born with the head presenting in the first position. The first two were boys, then a girl, next a boy, and then another girl. Not one of the children survived the third day. Their length varied from 15½ to 16½ inches. The second boy weighed less than two pounds. Although all were regularly formed, they did not appear to have attained perfect maturity. With the boys, the cord was sixteen inches long, but only twelve with the girls; the pulsation of the cord could scarcely be perceived at the moment of birth. The children had an old look, the voice was tremulous, they slept continually. Their temperature was very low. The mother soon regained her health.—*Gemeinsae Deutsche Zeitschrift für Geburtskunde*.

"(From the London *Lancet*, vol. xxxvii. 1839, p. 743.) Case of a woman pregnant with five children. Dr. Evory Kennedy pro-

duced five fetuses, with their involucra, the product of a single abortion, at the meeting of the Dublin Pathological Society, held on the 14th inst. The patient had been attended by his late assistant, Dr. Thwaites, and pupils of the hospital, and the facts of her case were accurately noted, so that deception was impossible. The specimen produced, Dr. Kennedy stated to be the multiparient conception of a female, who aborted when, as she stated, she was three months gone with child. The case was one in which there appeared to be three distinct ova; two of these were twins, the third was single, so that five fetuses coexisted in utero. On examining the preparation, Dr. Kennedy remarked that, closely viewed, it would be found that those on each side differed from the centre one. Each of the former possessed a common placenta, and membranes common to both, with an intervening septum; but the centre one is distinct and perfect in itself, having its own placenta and membranes. Some persons have been disposed to question the occurrence of these multiparous births; indeed, it must be acknowledged that the popular opinion, and even recorded cases, on the subject are sufficiently extravagant: as, for instance, the Countess of Hanneberg's case, in which it was stated that 365 children were produced at a single birth. But without taxing our credulity in these cases too far, we have, undoubtedly, a few well-authenticated instances on record, in which women have given birth to five children at a time. One of these, Giuseppe Califani, occurred lately at Naples; and we have the details of another, which took place in Franklin County, in America, about twelve years ago, recorded by Dr. Paddock. There is also said to be a similar preparation in the British Museum. It is extremely curious and interesting, as connected with the history of multiparous births, that in this respect Ireland preponderates over all other nations, and that the Irish are unequalled in the ratio of their fecundity. The proportion of twin cases in Dublin is one in sixty; in America (where, it is to be recollected, there is a large number of Irish emigrants) the proportion is one in seventy-five; in London it is one in ninety-one; while in France, *longo intervallo*, it is one in one hundred and forty. In proof of the rarity of five twin children, Dr. Kennedy further remarked that, out of 140,000 cases recorded in the Lying-in Hospital of Dublin, there is no instance of five children at a birth. There is one case of four, but none of five. It is a curious fact that in the American case the mother was an Irish woman, and had recently arrived in America. It may, perhaps, be considered equally curious that in the case detailed by Dr. Kennedy, the father was a man of small stature, aged about 30, without any remarkable personal development, and by trade a tailor! The woman, the subject of the present memoir, whose name is Sarah Hickey, is 28 years of age. She was married about two years ago, and within nine months after brought forth her first child. The conception was uniparient. After the lapse of six months, she again conceived of the fetuses alluded to, and observed that during the pregnancy she increased very rapidly in size, and suffered very considerably from bearing-down pains, which rendered walking or standing

almost impossible. She had constant sickness of stomach—a symptom generally looked upon as an evidence of compound pregnancy. As to the abortion, it would appear to have been produced by inordinate distension of the uterus for its period, which, in its turn, led to parturient efforts, as the ova presented no morbid appearance. The fœtuses, which are all males, do not appear to exceed the development usually observed about the second month. And as Mrs. Hickey menstruated on the 24th of May, and miscarried on the 26th of August, it is more than probable she over-calculated the duration of her pregnancy. This preparation is in Dr. Kennedy's Museum, in the Dublin Lying-in Hospital."

Dr. Warren states that he has received the following account from a lady in New York, who had visited the mother and children, of a case of the birth of twelve living children in the space of forty-two months (three years and six months).

"Mrs. M., 32 years of age, was married at 14. Her first child died. She then had twins, one of which lived a month, the other six weeks. Then twins again, both of which died. She then had a child, who is now a fine healthy girl, 14 years of age. She then miscarried with triplets. Afterwards she gave birth to twelve living children, in the space of about forty-two months, in the following order:—

July 24, 1858	one (1)
June 30, 1859	two (2)
March 24, 1860	two (2)
March 1, 1861	three (3)
February 13, 1862	four (4)
Total	twelve (12)

And in all, 21 children in eighteen years.

"The woman has never been confined to her bed more than three days after delivery. The children are all remarkably healthy and well developed for their years."

(B) CONCERNING THE DISEASES OF WOMEN.

ART. 213.—*On Uterine and Ovarian Inflammation; and on the Physiology and Diseases of Menstruation.*

By EDWARD JOHN TILT, M.D., &c.

(Third Edition, with Coloured Plates. 8vo. Pp. 470. London. 1862.)

The approbation bestowed upon the second edition of this work has stimulated the author to improve the third issue. The book in its present form deserves attention, and we doubt not that it will prove a useful manual on uterine and ovarian diseases to the student and junior practitioner. It might have been made shorter with advantage, and many of the cases are detailed in a way which we do not quite admire; but these shortcomings must be overlooked in the face of the valuable matter which is interspersed through the various chapters. Some authors write in a quiet, unassuming style, while

others appear to think that a theatrical and pedantic air will be more acceptable to their readers. Doubtless it is quite a matter of taste ; but it must be confessed that we begin to feel impatient when we read of a lady who "let her anguish prey on her own vitals," of another who was "strangely idiosyncratic," and of a third who had a terrible battle to fight within herself when she broke off an engagement. One patient, too, had a tongue which "was so thickly furred that it resembled a sheepskin door-mat seen through the wrong end of a telescope;" a description which is not very instructive, as we have been unable to find any gentleman who has ever resorted to this method of examining his household furniture. Moreover, we would rather that a physician should forbid sexual intercourse, than *enjoin strict abstinence from the nuptial bed*; we prefer heat to *caloric*; previous to the change of life seems better than the *dodging-time*; and we have not much sympathy with "a martyr to uterine disease," though we are surprised the sensation of cold at the lower part of her back was unrelieved by having the sacrum "ironed with a well-heated flat-iron." Dr. Tilt refers to the difficulty of buoying up the hopes of patients afflicted with chronic diseases, and remarks that it cannot be done "without great faith in the powers of nature and in one's own skill." We have read most of the cases recorded in these pages, and it has seemed to us that the author in his treatment has not left much to nature; but if the use of a large number of remedies, if active treatment is synonymous with skill, Dr. Tilt must be a very clever practitioner. It is to be hoped that he has more solid grounds for believing in the efficacy of therapeutical agents than one reason which he gives for thinking a certain anodyne mixture to be valuable, viz.—"that at the public institutions to which I am attached, I am very frequently applied to by the patients for *some more of the same stuff which did them so much good before.*"

We trust we shall not be deemed hypercritical in pointing out these passages; but we do so because they are merely examples of numerous similar blemishes, and because we believe that Dr. Tilt's very useful work will be more extensively read if he will write more curtly and in a less ambitious style.

ART. 214.—*Case of Ovaritis.*

By Dr. LAMM.

(*Schmidt's Jahrbücher*, No. 6. 1862.)

CASE.—The patient was a woman aged thirty-seven, the mother of four children, who for some days past had been anticipating the commencement of the menstrual flow. The belly was tender, especially around the navel. The hypogastric region gave a dull sound on percussion, and a swelling was perceptible here, evidently the fundus uteri. The posterior wall of the uterus was somewhat tender on pressure; the portio vaginalis of the cervix thick and swollen. Pulse full and rapid. Leeches to the cervix, cupping, mustard plasters and warm baths to the belly, together with the internal use of morphia, much relieved the patient. On the third day, however, the morphia was obliged to be suspended, owing to threatening narcotium; and the pain now returned, and some renewal of the morphia was absolutely

necessary. The patient sank rapidly, and died on the seventh day of the illness. On opening the belly, there flowed out some two quarts of turbid serum. The abdominal cavity was filled with thick pus; the visceral layer of the peritoneum was highly injected in various parts. The ovaries were adherent by recently effused lymph to the jejunum. The right ovary, which was of the size of a walnut, and was shrunk together, contained a cavity, with pus, from which an opening led through the peritoneal covering into the cavity of the peritoneum. In the left ovary there was a fresh corpus luteum. The uterus was twice its normal size, the posterior wall somewhat flexed upon the cervix, and atrophied. The vessels remained gaping when cut across. The cæcum and vermiform process were healthy. It was evident that the original mischief had been ovaritis, and that an escape of pus into the peritoneum had caused the fatal peritonitis.

ART. 215.—*On Gonorrhæal Ovaritis.*

By MR. VICTOR DE MÉRIC, Surgeon to the Royal Free and German Hospitals.

(*Lancet*, June 14, 1862.)

This paper sheds considerable light upon this obscure subject, for it must be observed, as Mr. de Méric says, that not only gonorrhæal ovaritis, but gonorrhœa itself, as affecting the female sex, are imperfectly known. In the cases given, moreover, the gonorrhœal discharge was undiminished when acute metritis and ovaritis supervened, instead of being on the wane, as in the few cases already on record.

CASE I.—*Ovaritis on the left side; gonorrhœa.*—On Oct. 27th, 1858, I was asked to see the wife of a wealthy tradesman in one of the metropolitan suburbs. She was said to be very ill, and I found her in bed. The patient, who was then about thirty-two years of age, stated that for three weeks at least she had noticed an abundant discharge, which had considerably stained her linen with large yellow spots. The discharge had of late increased, and she had been obliged, on the day of my visit, to take to her bed, owing to a severe pain in the left iliac region. There had been a certain amount of uneasiness in micturition, but that had passed off. The last menstruation had occurred about three weeks before.

On examination, I found the patient suffering from feverishness; the linen shown to me was marked with large yellowish spots, and pain on pressure over the left ovary was very acute. The diagnosis of a case of this nature was seemingly easy enough. I suspected subacute metritis, the inflammation having suddenly extended along the Fallopian tube, and reached the ovary. This latter circumstance was explained by an imprudent exposure to cold—viz., driving home from the theatre in an open carriage. The pain was so acute that I did not propose a vaginal examination, but at once ordered fomentations to the left iliac region, a gentle purgative, an antimonial mixture, low diet and rest. It should be noticed that the lady was suckling a child about seven months old.

On leaving the house, the husband accompanied me, and inquired about the state of his wife, hoping it was nothing serious. As he had been under my care some years before for gonorrhœa, I thought it my duty to ask him

whether anything of the kind had happened again ; and I learned that he had been suffering from a slight discharge, which was going off.

The case now took a different aspect, and after weighing all the circumstances, I came to the conclusion that my patient had been infected, and was labouring under gonorrhœa, the inflammation having travelled to the ovary by way of the uterine cavity.

On the 29th, two days after my first visit, I saw the lady again, and found that the discharge had diminished ; the pain over the left ovary was still severe, though the pulse had somewhat come down. I proposed leeches, but so much repugnance was expressed, that I advised counter-irritation by mustard poultices, and the use of the same lowering means. The case progressed very favourably : a few astringent injections were made as soon as the acute inflammation had gone by ; and in about three weeks the patient had so far recovered as to resume her household duties. I did not think it necessary to advise the weaning of the child. The father also regained his health in a short time.

I am fully aware that cases of this sort are not completely conclusive, and that the phenomena might be explained by the occurrence of simple metritis and inflammation of some portion of the broad ligaments of the uterus. There is, however, some evidence in favour of the gonorrhœal nature of the discharge, for we had proof of the manner in which infection had been conveyed. And if the lady suffered from gonorrhœa, the ovaritis with which she was attacked may fairly be ascribed to the travelling of the irritation of the mucous membrane through the uterus and the Fallopian tube. At the time the pain was so acute I might, perhaps, have made a vaginal examination, and pushed the index finger into the utero-vaginal cul-de-sac to reach the enlarged and inflamed ovary ; but the feverishness was so great, the vaginal canal so tender, that I abstained. Nor will the actual pathology of the complaint be thoroughly elucidated until a possibility arises of making a post-mortem examination in a case of supposed gonorrhœal ovaritis. Before venturing on any further remarks respecting this disease, I will briefly relate the second case, which presents features somewhat more marked than the first.

CASE II.—On the 20th of February, 1861, I was consulted by a patient, about thirty-six years of age, whose profession I shall not mention for fear of offering too easy a clue. He stated that he was suffering from a discharge which he had contracted in the North of England, and for which he had already used several remedies. I had treated him before for the same complaint, and now gave him directions for medicines and injections. When I had done, he stated that he had been imprudent enough to have intercourse with his wife, (about thirty years of age,) and that she now complained of a discharge and a severe pain in her side. He had confessed his error to her, and she had expressed a wish to see me.

I found her in bed, with a hot skin and hard pulse, complaining of severe pain in the left iliac region, and a profuse vaginal discharge. She stated that for three weeks she had been subject to a thick yellow discharge, the cause of which she could not make out. Three days before my visit she had been seized whilst walking with the pain over the left ovary, and that pain had increased up to the time I first saw her. The treatment was nearly the same as with the patient of the first case, but the antiphlogistic measures were more energetic, for this lady was of a stout build, robust, and not suckling. The pain on pressure had been extremely severe on the first examination, and I was struck at the analogy of this case with the preceding. Fomentations, followed by large linseed poultices, gave much relief, and warm poppy-water injections into the vagina aided in soothing the pain. When by these means, rest, and cooling medicines, the acute symptoms had been

allayed, I directed my attention to the vagina, and ordered injections, with counter-irritation by blisters over the left ovary. It was full three weeks before the discharge began to diminish; but the pain had given way a few days previously.

When the abdomen could be freely handled, I explored, in both cases, the region where the pain had been so acute, in order to ascertain whether a hard substance in the neighbourhood of the ovary could be detected, but did not succeed. The fibrinous effusion into the epididymis which gives this appendage its hardness in orchitis led me to suppose that some similar process might take place in the ovary; but as far as these two cases are concerned, no such detectable change had occurred.

That the ovary had suffered in the cases I have related is extremely probable; but I would beg to remark that the ovarian uneasiness may extend to the neighbouring parts, and that a kind of severe rheumatism may accompany it. I ground my opinion on the following case, which will be found interesting in several respects:—

CASE III.—In the year 1856, a married gentleman, aged about forty-five, called upon me to obtain advice for a urethral discharge, contracted in the following manner. Being in Scotland about a fortnight before his visit, he had paid attentions to a young person who, he was led to believe, had not been noticed in the same manner before. Several visits of this kind had been paid, and the patient finally returned to London. When he reached his home a full week had passed since his last error. A strict examination convinced him that he was quite well, and he thought himself justified in fulfilling his conjugal duties. On rising next morning, he was horror-struck on finding that a profuse yellowish discharge issued from the meatus. He tried to shape a treatment for himself for about a week, when a new complication arose. His wife began to complain of an abundant muco-purulent flux, and severe pain on passing urine. In a few days, the discharge had not only increased, but had become mixed with blood, which circumstance astonished her, particularly as for the last two or three years she had ceased menstruating. These symptoms were sufficiently distressing, but the lady was far from suspecting the nature of her complaint. All this I learned on the husband's first visit, and he ended his tale by stating that his wife was in my waiting-room. I promised to save her the annoyance of learning her husband's errors, and had her shown in. She was in a pitiable state, the vulva and vagina being highly inflamed, the discharge very profuse, and the hæmorrhage pretty considerable.

I examined this lady more completely than the two others, as she afforded me every facility, in the hope that I could relieve the pain she was suffering. I advised rest, poppy-water fomentations and injections, warm hip-baths, gentle purgatives, and antimonials. The husband had injections and copaiba. I saw her the next day at her residence, and found that the fever and inflammatory symptoms had somewhat given way. But now she began to complain about the *right* iliac region; the pain was described as running up to the crest of the ilium, and to be most distressing.

Commenting on these cases, Mr. de Méric says:—

“It is to be noticed that in none of these cases was the uneasiness seated in the *inguinal* region, for I was in all very careful to distinguish threatened bubo and inflammation of an internal organ. In the present case there evidently was a dash of rheumatism connected with the pain, as the crest of the ilium was extremely tender; and the subsequent symptoms justified this supposition. I ordered fomentations to the iliac region, the same applications to the vulva

and vagina, and full doses of opium. The improvement was extremely slow, and it was soon found necessary to make the lady keep her bed, as the iliac pain suddenly flew to the arm on the same side. Here I used frictions of a narcotic kind; and as the inflammation about the vulva and vagina had abated, I was able to use direct mineral astringents, such as alum and zinc. A full month elapsed before decided improvement was obtained; the ovarian pain receded first, then the crest of the ilium and the arm improved, the most obstinate symptom being the vaginal discharge.

"I consider this case more instructive respecting the manner in which gonorrhœa may be conveyed than with regard to the pain in the ovarian region. I would, however, submit, that here again we may suppose acute inflammation somewhere about the broad ligaments; and there is some reason to suspect that the ovary shared in the phlogosis. As the inflammation about the vulva and vagina was very considerable, the discharge profuse, and the rheumatic pains very distressing, I did not, in this case, pay to the ovaritis the exclusive attention which it obtained in the other cases; but there can be but little doubt that the gonorrhœal complication which occupied us existed in this third case as well as in the two others.

"It is well known that, as a rule, orchitis occurs towards the decline of the gonorrhœal discharge; whilst the ovary in these cases became affected at the very acutest point of the disease. This is a very striking contrast, and would seem to militate against the analogy which has been thought to exist between gonorrhœal orchitis and gonorrhœal ovaritis. Another difference which I would beg permission to point out is the effusion and consequent hard deposit which takes place in the epididymis when the testicle is attacked with orchitis. No such effusion, as far as we know, takes place in the ovary—at least, no hardness can be detected in the ovarian region after gonorrhœal ovaritis. I was careful to seek for it in two of the cases, and could find none.

"Another very important question, and which has not as yet been solved either way, is the supposed loss of generative power which a testis undergoes after an attack of orchitis. Whether a testicle or an ovary is spoiled by the inflammation arising from gonorrhœa is not quite ascertained. I may state, however, that I have had under my care a gentleman who suffered from orchitis in one and the other testicle successively, and who remained free from any of the evils just alluded to. It is also a question, on the other hand, whether sterility may be connected with ovaritis, either gonorrhœal or idiopathic.

"From the cases I have enumerated, it may be seen that, in my hands, the treatment of gonorrhœal ovaritis has been extremely simple. At first sight it would appear as if leeches in so acute an inflammation must be of great service; but I have learned from the many cases of orchitis I have treated that leeches are by no means indispensable. No doubt we succeed with their aid in hastening resolution; but I have found that rest, soothing applications, and low diet lead, in almost as short a time, to the same results.

"As ovaritis, as far as I have seen, occurs during the acute stage

of gonorrhœa, the discharge must be treated at the same time as the ovarian complication; this being again a contrast with gonorrhœal orchitis, in which disease it is prudent to leave the discharge undisturbed until the inflammation of the epididymis has been subdued."

ART. 216.—*On Spasmodic Contraction of the Sphincter of the Vagina.*

By MM. DÉBOUT and MICHON.

(*Bull. de Thérap.*, and *Medico-Chirurgical Rev.*, Jan. 1862.)

M. Débout desires to call attention to an affection of the vagina which, from the little notice taken of it in surgical works or clinical lectures, would seem to be of somewhat rare occurrence. It is especially observed soon after marriage, but it is also met with in women who have borne children. It consists in a spasmodic contraction of the vagina, which, by presenting an obstacle to the completion of the act of copulation, becomes a cause of barrenness. All attempts at sexual approach arouse the spasmodic action of the muscle, producing excessive and unbearable pain until suitable treatment has been resorted to. The contraction being usually a secondary affection, it is in the etiology the practitioner must seek his therapeutical indications. Its causes are indeed numerous, as inflammation of the mucous membrane, herpes or eczema of the vulva, and inflammation of the mucous follicles; but the two most frequent causes, especially among women whose nervous system is highly impressionable, are hyperæsthesia of the vulvar mucous membrane and fissures at the entrance of the vagina. It will be easily understood that an excitable state of the nervous system must predispose women to this spasmodic affection; and, in fact, in such subjects the slightest painful affection of the vulva induces reflex actions, which lead at last to a spasmodic contraction of the muscular plane situated at the lateral parts of the vagina. Another predisposing cause is found in the anatomical disposition of the parts in certain women. The perinæum in such individuals is so highly placed, that when the woman is in the horizontal position, in order to effect the introduction of the finger or the speculum, this has to be carried in a more or less oblique line from above downwards, and from without inwards, so as to form a more or less acute angle with the pubis, in place of being directed horizontally, as in the ordinary state of parts. When this conformation exists in a newly-married woman, the coïtus may produce laceration of the upper part of the hymen. Then, again, the ineffective efforts at penetration in some cases, resulting either from want of perseverance or from defective virility, may create an irritation of the tissues which may be followed by spasm.

In those cases which have been hitherto recorded, the treatment by incision has been put into force; and M. Débout thinks that has been the case in some instances when milder measures, and less alarming to the patient, would have sufficed. He believes that surgeons have too readily endeavoured to relieve the contraction without due reference to its causes. Of these, hyperæsthesia and

fissure are the most frequent; and the former condition is best relieved by cold, employed by means of hip-baths and enemata, and especially by ice frequently renewed. The fissure of the vagina is best treated by a concentrated solution of nitrate of silver, applied every two or three days with a pencil over the whole extent of the eroded surface. When the sensibility of the parts has become abated, dilatation of the contraction may be gradually accomplished by the insufflation of caoutchouc *ampullæ* resembling those which are employed to arrest hæmorrhage from the rectum.

M. Débout relates two interesting instances in point, and their publication has caused accounts of many other cases to be forwarded to him. The most interesting of these communications is from M. Michon, who communicates notes of eleven of these cases which have occurred in his own practice, chiefly in consultation with Chomel. The cases were, in some instances, examples of true contraction of the sphincter, a morbid condition of the muscular fibre which may occur at any epoch, even in a woman who has borne children. But in most of the examples, conjugal relations had never been accomplished. In these latter cases, mere superficial incisions were usually required, implicating only the mucous membrane irritated by the unsuccessful attempts at cohabitation, and those portions of the partially destroyed hymen which were always found to persist. These incisions never reached the muscular fibres, and were only made, in fact, to facilitate the introduction of tents, the gradual dilatation by which overcame the contractions. When, however, the contraction was more complete, and resistance of muscles, not of a mere irritated and thickened membrane, had to be overcome, the case assumed a great resemblance to the contraction of the anus resulting from fissure; and forced dilatation by means of the fingers, with or without subcutaneous section, constituted the best treatment. Where the patient objects to this, the somewhat slower process of dilatation by tents must be substituted. As to the primary lesion, so much insisted upon by M. Débout, no fissure has ever been met with in any of M. Michon's cases; and even if it were present, that would not deter him from treating the contraction at once, as the healing the fissure would be the consequence of the removal of this. M. Michon observes, that one reason why this affection has been so little noticed in books is, that it is rarely met with in hospitals. Its subjects usually belong to a higher sphere of society, in which education develops the functions of the nervous system at the expense of the physical powers, and in which sensibility being exalted, spasmodic affections more readily occur.

ART. 217—*On Vaginismus and its Treatment.*

By Dr. J. MARION SIMS.

(*American Medical Times and Medical Critic*, July 2, 1862.)

"In a case of vaginismus," says Dr. Sims, "the gentlest touch with the finger, a probe, or even a feather, produces the most extraordinary agony. The sensitiveness is at all parts of the vaginal

outlet, is very great at the meatus urinarius, and on each side of it, just where the hymen takes its origin; is greater still on the vulvar or outer face of the hymen, near the orifice of the vulvo-vaginal gland, and greatest at the sulcus or reduplication from the vulval orifice. Often, the most sensitive point of all is at the fourchette, where the hymen projects upwards. I have often heard patients shriek with terror and agony, exclaiming that I was thrusting a dagger into the body, when I merely touched the sensitive points with a camel's-hair pencil or a soft feather; and again these same patients have declared that they felt comparatively nothing when I have had the parts held asunder, so as to pass a probe into the vagina, making forcible pressure against the internal or vaginal surface of the hymen; thus proving that while the outer face of the hymen was supersensitive, its inner surface was normal. In all cases the mere spasm of the sphincter is painful, and in many cases the sphincter ani feels almost as hard as a ball of ivory. Indeed, one of my patients supposed it to be a tumour to be cut out before she could be cured. The spasm of the sphincter is pathognomonic of the disease; the supersensitiveness, diagnostic. The fact is more delicately shown by touching the outer surface of the hymen, particularly at its reduplication, with a soft camel's-hair pencil.

Treatment.—The treatment consists in the removal of the hymen, the incision of the vaginal orifice, and subsequent dilatation. The last is utterly useless without the others, but is essential to easy and perfect success with them.

"I usually make two operations, though all may be done in one. Placing the patient, etherized, on the left side, I seize the hymeneal membrane with a pair of forceps, just at its junction with the urethra on the left side, and putting it on the stretch, clip it with properly-curved scissors till the whole of it is removed in one continuous piece. In some cases the hæmorrhage is sufficient to require a compress of lint, thrust into the mouth of the vagina, while in others it is unimportant. In two cases the bleeding was excessive, but was easily controlled by the liquor ferri persulphatis. The cut usually heals in three or four days, after which the operation for radical cure may be performed.

"Notwithstanding the removal of the thick, sensitive hymen, the cicatrix marking the original place at the mouth of the vagina is excessively sensitive, and in some instances feels hard and tense, as if a small cord were constricting the outlet. This I formerly divided at different points and in divers ways during the course of experiments, and finally arrived at the following method as being the surest and best:—

"Place the patient, fully etherized, on the back, as in the position for lithotomy, pass the index and middle fingers of the left hand into the vagina, separate them laterally so as to open the vagina as widely as possible, putting the fourchette well on the stretch. Then make a deep cut with a common scalpel through the vaginal tissue on the right of the mesial line, bringing it from above downwards, and terminating at the raphe of the perineum. This cut forms one

avd

side, the left, *d*, *b*, of a *b* : . Then pass the knife again into

c

the vagina, still dilating with the fingers as before, and cut in like manner on the opposite side from above downwards, uniting the two incisions at the raphe as shown by the line *d b*, which is to be extended quite to the perineal integument, and through its upper border, as shown by the dotted line *b c*. Each cut will be nearly two inches long, extending from about half an inch above the upper border of the sphincter vaginae, across the sphincter for about half an inch, and down to the perineal raphe for nearly an inch more. Of course this will vary in different subjects according to the development of the tissue in each. To perfect the cure, the patient will wear for a time a properly-adapted vaginal dilator. I use an instrument usually made of glass, sometimes of silver, or other metal silvered or gilt. I prefer glass, because it is cheap and easily kept clean, while, being transparent, it is easy to see how the wound is progressing without removing the instrument. Moreover, some patients have insisted that a glass instrument is more comfortable and less irritating than one of metal. I am not prepared to say whether this be true, yet there may be both truth and philosophy in the assertion, as one substance is the worst conductor of heat, and the other among the best. The dilator is sometimes introduced as soon as the operation is finished, especially if there be much hæmorrhage, which always ceases immediately in consequence of the pressure of the instrument. But most generally I do not order it for twenty-four hours after the operation, when it is worn two, three, or four hours. Its introduction is attended with a sense of soreness, but with none of the peculiar, agonizing suffering characteristic of the original disease. The instrument is usually worn for two hours in the morning, and two or three hours in the evening, more or less, according to the tolerance of the patient. I have been often astonished at the rapidity with which the cuts heal, the process being seemingly facilitated by the pressure of the glass dilator, which is to be worn daily for two or three hours, or until the parts being entirely cured and all sensitiveness removed, the patient may be pronounced competent to fulfil comfortably and pleasantly the duty of a wife.

"The dilator is about three inches long, sometimes a little more, slightly conical, open at one end and closed at the other, and of different sizes, varying from an inch to an inch and a half in diameter. At the largest part near the outer extremity, there is a depression on one side for the urethra and neck of the bladder. It is open at the outer end to allow the pressure of the atmosphere to hold it in the vagina, which it does very effectively. When closed at both ends, a T bandage is necessary, and the instrument often slips. I found that a perfectly round cylinder, on being worn for three or four hours, always irritated the urethra and neck of the bladder; hence the urethral depression on one side, which also materially aids its self-retaining power."

ART. 218.—*On Diphtheritic Inflammation of the Procident Uterus and Vagina.*

By Dr. J. MATTHEWS DUNCAN, Clinical Lecturer on Diseases of Women in the Royal Infirmary, Edinburgh.

(*Edinburgh Medical Journal*, October, 1862.)

A case which Dr. Duncan relates in this paper, and several other cases of a like kind which have come under his notice, lead to these results:—

"1. That diphtheritic inflammation of the mucous surfaces of the female genital organs, when exposed in procidentia, is not uncommon.

"Many writers describe deep ulcerations, perforations of the bladder, and gangrenes, of which this kind of inflammation may be the starting-point.

"2. That the diphtheritic patches may maintain their position and characters for many weeks, and probably for much longer.

"The new membrane adheres to the subjacent mucous surface with degrees of tenacity varying at different times. It is often almost impossible to separate it from the portions of uterine mucous membrane that are covered by it, while its attachment to the vaginal mucous membrane is less firm.

"3. That diphtheritic patches in this situation are probably sometimes supposed to be ulcerations.

"The deception of the observer is easily accounted for by the appearance of the patches, their elevated margins, and the red enclosing line.

"That the detachment of such diphtheritic patches takes place in various ways,—

"a. A superficial gonorrhœal inflammation may throw off the membrane, and the subjacent mucous tissue be left healthy or superficially abraded.

"b. I am inclined to explain appearances observed in several cases by the gradual desiccation of the membrane and its detachment like an extensive scale or scab. The subjacent and now exposed mucous membrane is left entire and healthy, or ulcerated in parts.

"c. Replacement of the affected parts, and their retention within the pelvis, produces a slow detachment which I have not carefully observed.

"5. That the diphtheritic membrane may gradually become thinner and thinner, while at the same time the subjacent epithelial structure is destroyed. In short, the diphtheritic patch may degenerate into an ulcer. This change may effect an extensive patch, or only parts of it."

It is to be understood that Dr. Duncan does not here speak of diphtheria, but only of pellicular or diphtheritic inflammation, apart from any real or imaginary constitutional affection.

ART. 219.—*The Vessels concerned in the Production of Phlegmasia Dolens.*

By Dr. TILBURY FOX.

(*Proceedings of the Royal Medico-Chirurgical Society, July 1, 1862.*)

After referring to Dr. Mackenzie's experiments as insufficient to determine the question of the production of phlegmasia dolens, Dr. Fox proceeds to argue that venous obstruction is followed by œdema only; that the action must be the same, whether the obstruction be produced locally or indirectly through a vitiated blood condition. If any difference in the two cases existed, the changes over and above œdema, which characterize the lesion as phlegmasia dolens, must be ascribed to the action of the blood state (which is absent in the locally produced disease) upon the general textures of the limb. If this view be adopted, the influence of the veins is *nil*, and we must look for the explanation in a special action carried on between the blood and the tissues. That the clinical history forbids the acceptance of such a doctrine, inasmuch as the very conditions (*viz.*, blood-vitiation tending to produce "phlebitis") which are regarded as the cause of phlegmasia dolens very frequently exist, and yet are very rarely followed by white leg—for example, in the various blood-poisonings unconnected with the parturient condition. That if produced under the circumstances mentioned, the disease ought not to be so frequently unilateral, nor confined to the lower limbs. That the occurrence of white leg in cases of cancer, phthisis, pressure, &c., could not be explained hereby. That the death-rate of phlegmasia dolens forbids the same interpretation of the phenomena. That in the experiments of the injection of lactic acid into the blood by Dr. Mackenzie, there was no evidence to show that in the dogs operated upon anything but œdema resulted. That the existence of phlebitis, except as the rarest feature, is fallacious in cases of venous disease. Attention was then drawn to the distinction between the coincidences and the essentials of phlegmasia dolens, as in the case of puerperal fever complicated by the latter. For example, take away from the general total of such cases the proper puerperal fever symptoms, and the phlegmasia dolens remains in perfect integrity; *per contra*, take away the hot, white, tense, elastic swelling, and the puerperal fever remains in its entirety. In the combination, however, the pathological changes normal to phlegmasia dolens may be modified by the tissue actions (abscess, &c.), which are the consequences of the existence of a virus in the blood; in uncomplicated phlegmasia dolens, the tissues are passive, so to speak. The succeeding remarks go to show that the theory propounded by White was correct with regard to the nature, though not as to the cause, of phlegmasia dolens; that in the natural condition a large quantity of lymph travels from the limbs towards the thoracic duct, and when this current is considerably impeded, white leg resulted. The case of the absorption of a poison into the cellular tissue (which, according to some, controverts White's opinion) is examined, and

it appears that this might or might not be followed by phlegmasia dolens, according as the obstruction in the lymphatics affected the main current or merely some minor channels (the latter being the rule); the swelling being modified in severe cases, as before observed, by the relative action of a septic state of the blood and tissues. Cases are quoted to prove that lymphatic obstruction is sufficient, and alone necessary, to give rise to phlegmasia dolens. The paper concludes with the following summary:—1. Phlegmasia dolens is a local disease. 2. No general symptoms need be present (implying absence of blood-poison). 3. Phlebitis, however produced, cannot give rise to phlegmasia dolens, but cedema only. 4. Phlegmasia dolens may occur in, but forms no necessary part of, blood-poisoning (such as tends to phlebitis), but is modified thereby frequently; and any tissue conditions over and beyond the presence of fibrinous serosity, and the consequent hypertrophous state of the areolar tissue, are in nowise essential components of phlegmasia dolens, but common alike to very many different "blood" diseases. 5. Obstruction to the main lymphatic channels alone is capable of giving rise to white leg, and acts by preventing the removal of the lymph from the affected limb. 6. The obstruction may be the result of (a) extrinsic pressure; (b) thrombosis due to sudden (compensatory) absorption of vitiated fluids after sudden loss of any kind; (c) inflammatory changes in the vessels themselves (rare). 7. The effect of the action of venous obstruction upon the phlegmasia dolens is an intensification of the general swelling, and the presence of cedema during the subsidence of the enlargement of the limb. Lastly, a frequent, but unrecognised, source of blood-vitiation is alluded to, namely, in cases where large tracts of cellular tissue are diseased—as in erysipelas, sloughing, cancerous, phthisical, and dysenteric ulcerations, and the like—the lymphatics, charged with *effete* matter, and an excessive number of imperfectly-developed pale cells, formed in their glandular part, pouring their contents into the venous system from the thoracic duct. And this might be a cause of thrombosis at the right side of the heart and in the vessels leading to the lung.

ART. 220.—*On the Treatment of Malposition of the Uterus.*

By DR. ROUTH, Obstetrical Physician to the Samaritan Hospital, in June, 1862.

(*British Medical Journal*, May 24, 1862.)

Dr. Routh considers that endometritis is a common cause of these malpositions, and that local depletion by the aid of leeches is, as a rule, the most successful treatment. This means failing, he has recourse to instruments. He objects to Dr. Simpson's intra-uterine pessary, and also to Dr. Moir's gutta-percha pessaries, being convinced that they cause much irritation, and he recommends an instrument consisting of a lower stem, in which is wire spirally arranged—indeed, an ordinary bell-wire spring. This lies within the vagina. To the superior end is attached a smaller spiral spring, and

well tempered. This lies within the uterus, continuous, however, with the larger spring in the vagina; the point of union being marked by a disk of gutta-percha, upon which the uterus rests. The whole wirework is covered by caoutchouc to preserve it from moisture, being closed permanently at the smaller and superior end, but at the larger or inferior end by a gutta-percha moveable stopper. The application of this pessary is easy. The sound properly bent, according to the amount of the version, having been introduced within the uterus and again withdrawn, a stilette which fits within the pessary is similarly bent. When passed within the pessary, this last takes the same shape, and is so readily introduced within the womb. The stilette is now withdrawn, the spring recoils, and the uterus is kept in its normal position. One important point in regard to the uterine portion of the pessary should be here noted. I never allow the end of it to touch the fundus, by making it at least half an inch shorter than the uterine cavity. From what I have told you of fundal endometritis, you will see the prudence of this course. From this last circumstance, and the fact that the stem is freely moveable on all sides, so that the jerks to which the uterus would be exposed by sudden movements of the body are obviated, it certainly seems to be borne better. There is one objection to its use to be noted here, but which can be obviated also by care. The projecting vulvar end has to be secured by a napkin or strings, and these sometimes chafe the external parts, especially with fat women. If the strings employed be of the circular caoutchouc, but little tenderness occurs."

ART. 221.—*Inversion of the Uterus of Thirteen Years' Standing reduced by a Novel Method.*

By Dr. E. NOEGGARATH, of New York.

(*American Medical Times*, April 21, 1862.)

CASE.—This case is that of a lady æt. 38, whose uterus became inverted at her first labour, on the 16th of April, 1847. Two unsuccessful efforts were made in 1848, to restore the uterus, and after this the treatment was restricted to the use of astringent injections to control the flooding. In February, 1860, the patient was first seen by Dr. N., who, having satisfied himself by careful examination of the existence of chronic inversion of the uterus, he proposed to attempt to restore it, to which the patient reluctantly consented.

On the 4th of March, 1860, Dr. N. having placed the patient in the position for lithotomy, and placed her under the influence of chloroform, first attempted reduction by the method proposed by Dr. White, of Buffalo. This failing, he was about to desist from further attempts, when the idea struck him of trying a different plan of manipulation. He applied his hand in such a manner that the fore and middle fingers grasped the right section of the tumour; while the thumb was implanted on the left side at a point where the upper two-thirds of its length met the lower one. In this manner a pressure was exerted by the thumb on the lateral border of the body of the womb, which pressure took an upward as well as a lateral direction, and resulted in the formation of an oblong groove, the long diameter of which pointed below towards the left horn of the uterine fundus, and upwards to

the spot where the inverted and the non-inverted portion met on the left side. The object of this first step of the operation was to completely double up the uterine cavity, so that the right—now inner—wall touched the left one. After this was completed, the dimpled portion was carried upwards by the thumb, and in doing so it could be observed that the right side of the upper section of the inverted cervix passed first of all through and beyond the os uteri. During the progress of this manipulation, the right lower section of the uterine body followed, and reassumed its normal position, while the opposite part of the fundus continued to remain outside the os, only much shortened and doubled up. As soon, however, as half of the tumour had disappeared inside the abdominal cavity, the intra-vaginal section slipped suddenly out of my fingers, and the operation was completed. The entire manœuvre was performed in a shorter time than it takes me to give its description. The entrance of the last portion of the uterus was so complete, that I deemed it unnecessary to introduce a bougie into the restored uterine cavity, with a view of preventing re-inversion.

After the patient had recovered her senses, she felt very weak and nauseated, in which condition she continued for the next twenty-four hours. Owing to a slight feverish reaction, she was not able to leave her bed for a full week. The operation checked the hæmorrhage at once, and in its place she remarked a moderate discharge of a thin serous liquid. Three weeks after the operation, the menses reappeared, and lasted seven days, the loss of blood being considerably less severe than it had been for many years back. A year afterwards, when I saw Mrs. Reaute for the last time, the position of the uterus was unchanged; pain, hæmorrhage, leucorrhœa had disappeared, and the appearance of the patient was considerably changed for the better.

ART. 222.—*Case of Ovariectomy in a Pregnant Woman.*

By Mr. —.

(*Medical Times and Gazette*, and *Dublin Medical Press*, September 24, 1862.)

The feature of special interest in the following case is, that during the operation the patient was discovered to be several months pregnant. "We are acquainted," says the reporter, "with the particulars of another case, in which ovariectomy was practised during pregnancy. In it, however, the period was not so advanced, and it was not till some weeks after the patient's recovery that her state was discovered. The case to which we refer occurred in the practice of a most experienced specialist. No one familiar with the diseases of women will feel any wonder at the occasional occurrence of such accidents. The diagnosis of pregnancy is often in uncomplicated cases sufficiently difficult, but when the abdomen is occupied by a huge morbid growth, the risk of a mistake is enormously increased. In Mr. Pollock's case, as will be seen, the tumour had been tapped only five weeks before the ovariectomy, but as it was multilocular, the fact that the abdomen was not wholly emptied was considered to be fully accounted for." The following are the details of the case:—

CASE.—A married woman was admitted into St. George's Hospital, under Mr. Pollock's care, for ovarian dropsy. About nine months before, she noticed a swelling in the left side of the abdomen. It increased so rapidly, and the distension was so great, that she was tapped four months from the time she first noticed the swelling. Soon afterwards she aborted. The

swelling again returned, and she was tapped a second time, as the distension was very great. This was five weeks before the operation of ovariotomy, which was performed by Mr. Pollock on August 28th. The relief by the tapping on that occasion was for so short a time, and the distress was so great, that the patient readily consented to take the chances of perfect cure afforded by the major operation. Mr. Pollock made an incision about six inches long, and thereby exposed the surface of the ovarian tumour, which was found to be multilocular, with one large cyst in front. This large cyst was tapped with a trocar and canula, and emptied of some very gelatinous fluid. The adhesions (which were not very firm) were next broken up, and the tumour was gradually drawn outwards. Some further adhesions were now broken through by the hand, and the pedicle of the cyst was exposed. It was now tied, first with a wire, and then with a double whipcord ligature, and divided. The tumour was composed of numerous cysts—many of them extending in different directions—it was presumed that all had been wholly removed. It was discovered, however, that another fluctuating tumour became immediately prominent, and as this had the general appearance of the other growths, it was believed to be an ovarian tumour springing from the right ovary, and really seemed to be so on examination. It was consequently tapped, and clear fluid flowed out. On attempting to lay hold of it, it was found to be a gravid uterus, containing a dead foetus; it was, therefore, not interfered with beyond closing the wound in its wall with silver sutures. There was very little hæmorrhage attending the operation—perhaps three or four ounces of blood were lost. The abdominal wound was now closed by ligatures, with the ends of those attached to the pedicle hanging out of the lower end of the womb, and the patient conveyed to her bed. In some clinical remarks made by Mr. Pollock after the operation, he stated that the case was one of extreme interest. The tumour, he said, was multilocular, with one very large cyst containing much highly gelatinous fluid; the pedicle was connected with the left ovary, and was itself occupied by a small cyst. Having removed the tumour, he came upon another mass, which proved to be the uterus with a dead child, and containing besides a quantity of fluid. It so closely resembled a cyst, that he, as well as his colleagues, thought it was another ovarian cyst involving the opposite ovary; and on tapping it, out came a transparent fluid, and then some venous blood. Every precaution had been taken before the operation to ascertain the condition of the patient. Remembering that she had aborted five months before, it was probable, he observed, that there was a second foetus which was not expelled at that time. The operation, so far as it had gone, was a sort of Cæsarean section, but he had not felt justified in proceeding further, thinking it better to let Nature take her course and the child come in the usual way. The prognosis he looked upon as necessarily most serious. Towards evening the patient was seized with pain, and aborted, the child and placenta coming away. This did not produce the amount of depression that was expected, although she was weak. Next day she was free from pain, and perfectly quiet. In the evening she expressed herself as feeling pretty comfortable, but during the night she became very low, and quietly died. No *post-mortem* examination was permitted by the patient's friends.

ART. 223.—*On the Operation for Vesico-Vaginal Fistula.*

By Mr. I. BAKER-BROWN, formerly Obstetrical Surgeon
to St. Mary's Hospital, &c.

(*Lancet*, November 23, 1862.)

The following account of this operation, as now performed by
Mr. Brown, is very clear and very interesting. Mr. Brown, as is

FIG. 1.

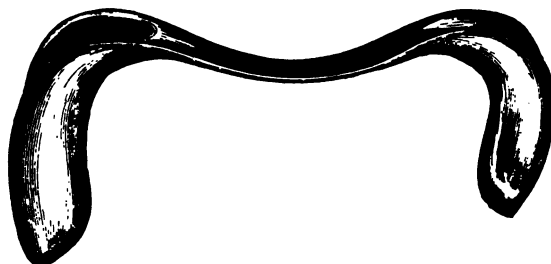
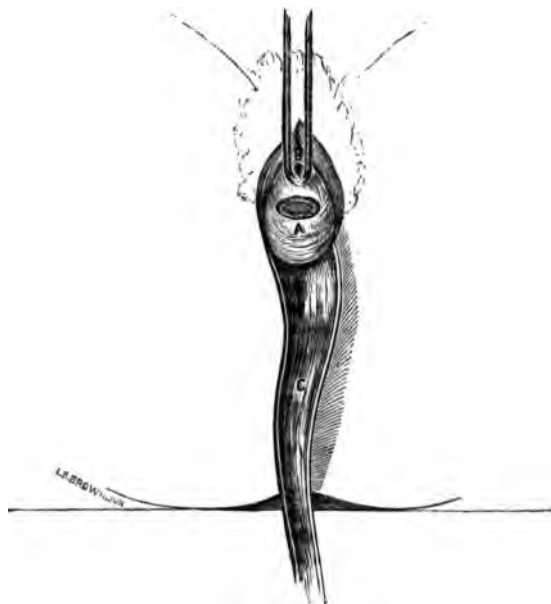


FIG. 2.



well known to all, has the advantage of the widest experience in this matter; for a year ago he had operated upon no less than 49 patients, with 47 cures and 2 deaths.

FIG. 3.

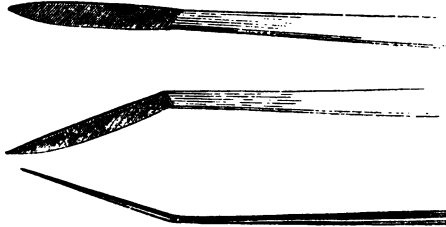


FIG. 4.



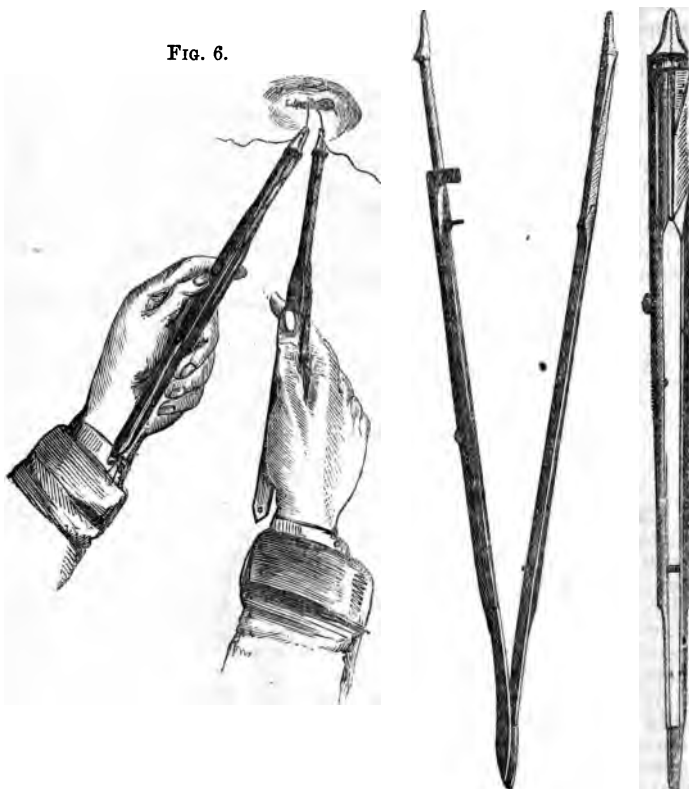
FIG. .



“The patient being placed under the influence of chloroform in the lithotomy position, or without on her hands and knees, the bent speculum (Fig. 1) is introduced, and, if in the former position, the urethra is held up by a pair of vulsellum forceps. The first step is

FIG. 7.

FIG. 6.



to pare the edges of the fistula. (Fig. 2.) This is done by knives made for the purpose, one for the right and the other for the left hand (Fig. 3.); the fistula being held meanwhile either by a pair of forceps, or transfixed by a curved needle. The latter is perhaps preferable, as, besides everting both edges of the fistula, it has the advantage of having a needle inserted ready to be armed in the second stage. This consists in passing needles, made on the same principle as Startin's; but instead of being of flexible material, they are made of rigid steel, and with various curves—fourteen in all. (Fig. 4 represents Nos. 1 and 14.) The needle is passed within a quarter of an inch external to the denuded surface, and thrust through the coats of the vagina and the muscular tunic of the bladder, avoiding its mucous lining, and out again on the opposite side at the same distance from the fistula. (Fig. 5, A.) The wire

having been previously passed, the needle is drawn out, the wire being held in (B) by forceps to be fastened. This is extremely simple. I have used shots and buttons, and have invented clamps, &c. (all of which are described in the book already mentioned), but I have come to the conclusion that nothing is so easy or effectual as simply to twist the wire round and round with the fingers, or, if too far to reach thus, by Weiss' self-holding forceps (Figs. 6 and 7). The ends of the wire are cut off (Fig. 5, c), and the operation is completed. No dressing is required. The patient is placed in bed on her side, with her knees drawn up. A male elastic catheter without the stilette and with bag attached, is introduced, and the patient left quiet for ten or fourteen days; when, to take out the wires, one has only to cut them on one side of the twist, and draw them out with forceps in the ordinary manner."

ART. 224.—*A Case in which Air was Expelled from the Vagina.*

By Dr. GEORGE HARLEY.

(*Lancet*, August, 1862.)

The chief points in the case are these:—The expulsion of the air is accompanied with a loud noise, and, although odourless, is attended with great personal discomfort. It began about eighteen months ago, at a catamenial period, and has recurred with increasing severity at each period, until now there are several discharges in the course of a few minutes. The patient is married. The vagina was carefully examined in order to find if any communication existed between it and the rectum, but none was found. Dr. Harley took a full sized male catheter, to which was attached a long india-rubber tube with a stop-cock at the other end. The catheter was introduced into the uterus, the end of the tube with the stop-cock being placed in a tumbler of water. No air escaped when the instrument was in this position; but on placing the open end of the catheter in the vagina an instantaneous discharge of gas took place. Soon afterwards the water was found to be sucked up through the tube into the vagina; and after one or two other experiments it was found that the vagina sucked-in and expelled the air by spasmodic action. It was further observed that the abdominal muscles materially assisted in producing this result; and although the patient has not the power of commencing the action, once it has begun and gone on for a few minutes, she has the power of continuing it.

This case was brought before the Obstetrical Society of London, and this short account is from the proceedings of the Society.

ART. 225.—On *Hydatidiform Ovum*.

By DR. GRAILY HEWITT, Physician to the British Lying-in Hospital, Lecturer on Midwifery and Diseases of Women and Children at St. Mary's Hospital.

(*Lancet*, October 8, 1862.)

The following case deserves record as an interesting contribution to the history and symptomatology of that not very common pathological condition—hydatidiform degeneration of the ovum.

CASE.—On August 18th last I was requested to visit in consultation with the gentleman in attendance, a lady who presented symptoms of abortion. The history of the case may be summed up very briefly. The patient, aged 28, who had been married exactly three months, was last “unwell” the week previous to her marriage. Three weeks ago, while out for a walk, she experienced a slight strain in getting over a stile, and dating from that time there has been a slight “show.” During the last fortnight she has been seen at intervals, and appropriately treated as for an impending miscarriage. The night preceding my visit, a severe flooding suddenly occurred at midnight, to restrain which the gentleman in attendance had plugged the vagina. The plug had been removed an hour previous to my visit (seven a.m.), and no further hæmorrhage had occurred. On examining the abdomen, I was struck by its great size; there was a tumour, evidently the enlarged uterus, reaching to *two inches above the umbilicus*. The first impression produced on my mind was that the pregnancy must have advanced much further than the time stated—three months. On examining per vaginam, the os was found open, and just within it was felt a soft, smooth substance occupying the lower part of the cavity, and having the feel of a placenta. The index finger passed readily round within the os, between the mass in question and the uterine wall. The case appeared at this stage of the inquiry to be one of placenta prævia. A further careful examination of the abdomen by the stethoscope and by palpation was instituted, and the patient cross-examined as to the history of the case, no opinion of course being expressed. The account given was again the same. No foetal heart-beat could be detected, but a murmur, like the placental souffle, was audible in the left groin. The uterine tumour was hard, firm, and resistant.

The physical appearances and the history of the case each pointed to a different conclusion as regarded the diagnosis. I determined, however, to introduce the hand into the vagina—the fingers only having been previously used—and to deliver the child, which I expected to find in the uterus, by turning, should that course be sanctioned by the results of further examination. With no great difficulty this was accomplished, but on passing the fingers into the uterus, no presenting part could be anywhere discovered. Everywhere a soft, slightly resisting mass was felt, traversed by what appeared to be fibrous bands. The failure to find any fœtus in the uterus, coupled with the sensation conveyed by the touch, at once indicated to me the nature of the case. The uterus was evidently filled with an hydatidiform ovum, and I forthwith drew from its cavity a mass of the product in question sufficient to half fill an ordinary washhand-basin. Mixed up with the vesicular bodies and their fibrous pedicles and stalks, were some flattened non-recent coagula; some of the vesicles were an inch in diameter. The structure was precisely similar to that presented in other analogous cases. No further hæmorrhage followed the emptying of the uterus, and the patient made a good recovery.

Commenting upon this case, Dr. Hewitt says:—"The case presents facts both interesting and instructive. One or two only of these I will allude to. As regards the origin and cause of the degeneration of the ovum in this case, it may be set down to the "strain" experienced by the patient three weeks previous. The fœtus (no trace of which, by-the-bye, was discoverable in the mass expelled) doubtless perished at that time, but the separation of the ovum from the uterus, though sufficient to kill the embryo, was not complete, and the chorion villi continued to grow by absorption from the lining of the uterus, the result being as above described. The facts of the case are quite in accordance with the theory of the nature of this curious pathological product I have elsewhere fully elaborated, and which I need not therefore discuss here.

"Clinically, the rapidity of the growth of the abnormal product in this case is interesting, and, in fact, this led to some perplexity in the matter of the diagnosis. In three weeks after the presumed commencement of the growth of the morbid product in question, the uterus had attained the size of that of a woman at least seven months pregnant. Rapid growth in the size of the uterus is well known to be one of the symptoms of the condition actually present; but in no previously recorded case has the uterus attained such a size as that above described at such an early period as three months after the commencement of the pregnancy. The nearest approach to it is a case related by Drs. Hardy and McClintock, where the woman was four months pregnant, and the uterus had attained the size of six months."

Dr. Montgomery, in reference to the diagnosis of these cases, says: "We have no satisfactory grounds on which to form an opinion in the way of diagnosis beyond this, that if a woman after experiencing the ordinary symptoms of pregnancy up to the third or fourth month is observed to be growing large with rapidity, so that her size corresponds to a period much more advanced than her pregnancy really is, or is supposed to be," &c. This proposition is well borne out by the facts of the case now related: up to the end of the second month matters proceeded regularly. The period at which the change may commence is, I believe, strictly limited to that interval of time during which the chorion villi are in one particular stage of development—from a short time before to a short time after the end of the second month. After the transformation of the villi into vessels has been effected, the production of the hydatidiform ovum is no longer possible."

ART. 226.—*On a New Description of Nipple Shield, and on the Treatment of Sore Nipples.*

By Dr. COOPER ROSE.

(*Lancet*, June 21, 1862.)

Frequently failing in the successful application of the various mechanical appliances to be found for the protection of sore nipples, the author has had some glass shields made by Messrs. Gilbertson,

of Ludgate-hill, from a model supplied by himself, and based upon the following principles:—1st. That the cylindrical portion should be long enough to ensure a space or vacuum between the end of the nipple when fully drawn out and the end of the shield. 2nd. That the diameter should be sufficiently large to render strangulation of the nipple impossible. 3d. That the shield should be smooth and unyielding, so as to avoid friction. 4th. That it should be transparent, so that the flow of milk may be observed and the position of the nipple ascertained. 5th. That the substance used for the mouth-piece should as nearly as possible resemble the parent's nipple, so arranged that it cannot collapse and allow the child to suck-in air. The author states that he has not met with a single case in which these shields failed to answer the purpose for which they are designed. The application of a saturated alcoholic solution of gum benzoin and glycerine in equal proportions in all stages and in every variety of chapped and tender nipples is strongly advocated, together with the use of the shield as long as tenderness exists.

ART. 227.—*On Injections in the Treatment of Uterine Diseases.*

By Mr. ROBERT ELLIS, Obstetrical Surgeon to the Chelsea and Belgrave Dispensary.

(*Lancet*, May 31, 1862.)

After making some very sensible remarks on the *uses* of injections in these diseases, Mr. Ellis speaks not less sensibly of the *substances* and *instruments* for injections. He says:—

“The *substances* adapted for injections in commonest use are of the stimulant and astringent kind. Of these, notwithstanding the opinions and practice of others, I consider the sulphate of zinc the most unjustifiable. I think I have seen it the cause of much irritation and mischief, and it is difficult to believe that the constant use of so poisonous a substance over so large a surface of mucous membrane can be other than injurious. The nitrate of silver is another substance most unsuited for injection, yet very frequently ordered for use. The mucus of the vaginal canal instantly decomposes it if used in a weak injection, and if in a stronger form, the excoriation of the external parts, together with the mischief inflicted on the linen, hands, and utensils of the patient, preclude its repeated employment. I have made use of a variety of substances for this purpose, but as simplicity and economy are chiefly of consequence in a daily matter of this sort, the result arrived at is, that a solution of alum, either alone or in decoction of oak-bark, is, after all, the best and most effective injection we can prescribe. A mixture of equal parts of tannin and alum forms a more elegant, but also more costly substance as an astringent. For the anodyne injections, solutions of belladonna and of opium are the only serviceable remedies, and to these may be added the liquor plumbi and hydrocyanic acid with occasional good effect. For emollients, milk-and-water, linseed-tea, barley-water, and thin starch or gruel, are very valuable. The in-

jection of gases and vapours is a very uncomfortable proceeding, and is not always free from a certain amount of risk, but considerable relief may sometimes be thus obtained when other means are useless. Of those most valuable are the carbonic acid gas and the vapour of chloroform.

“Lastly, of the *instruments* for injection. Gooch’s bent-pipe instrument is a cumbrous and dangerous apparatus, very apt to get filthy, and to inflict injury on the cervix. The glass ‘female syringe’ is a most absurd contrivance for cleansing a canal so spacious as that for which it is intended. It is also often broken, and sometimes within the canal itself. The ordinary pump, with elastic tube, has the disadvantage of requiring the assistance of a second person for its use. For the use of the poorer classes a simple and excellent instrument was contrived by me some years ago; it consists of a piece of gutta percha tube, five feet long, fitted at its upper end with an inch or two of elastic tubing: this could be slipped over the mouth of a common kettle, and the other end being placed in its proper position, the inversion of the kettle produced a constant stream of water of sufficient force to well wash out the canal. The same object may be also accomplished (and this method is largely used in France) by the use of a long syphon, the upper end being immersed in a reservoir of water, and the lower retained in the canal by the patient. The French have an extraordinary variety of instruments for this purpose, amongst the most useful of which is one on the principle of the moderator lamp. Without exception, however, the most commodious and useful of all instruments for uterine injections is the elegant arrangement known as Dr. Kennedy’s, and now becoming much used in this country. It may be employed either for gases or for fluids; as a douche or as an enema. An ingenious contrivance, known as the barrel syringe, made of caoutchouc, is also useful for this purpose; but the action of its valves is less to be relied upon than in the former instrument. For general use the douche just named is the best of all the varied forms of instrument for vaginal injections, and it will probably ultimately replace every other kind. Its valves require occasionally a little looking after and cleansing, but this is simple enough, as they merely consist of two metallic peas.”

ART. 228.—*On the Use of Medicated Pessaries in the Treatment of Uterine Disease.*

By Dr. TANNER, Assistant-Physician for the Diseases of Women, to King’s College Hospital, &c.

(*Medical Times and Gazette*, October, 1862.)

The great value of a variety of local applications in the treatment of uterine disease seems to be insufficiently appreciated by the profession at large. The chief reason, perhaps, for the non-employment of medicated pessaries has been the difficulty of so making them that they can be efficiently applied by the patient herself.

This difficulty is overcome by the use of the butter obtained from the theobroma cacao nut, as a material for holding the drugs together, instead of wax and lard. Mr. White Cooper has shown the utility of this butter as a basis for ophthalmic ointments, and it will be found equally valuable for pessaries and suppositories. Though it has the consistence of wax while cold, yet it becomes liquid in a few minutes when introduced into the vagina. After alluding to the cases of uterine, ovarian, and bladder disease, in which medicated pessaries are of great service, the communication ended with certain formulæ which the author was in the habit of prescribing. The following are examples:—

Mercurial ointment, four scruples; extract of belladonna, one scruple; cacao butter, four drachms; olive oil, one drachm. Mix; divide into four pessaries, and order one to be introduced into the vagina every night.

Iodide of potassium, one drachm; extract of conium, four scruples; cacao butter, four drachms; glycerine, one drachm. Mix; divide into four pessaries.

Boxes of these pessaries, prepared by Mr. Cooper, of 26, Oxford-street, were exhibited at one of the meetings of the Obstetrical Society of London, and this account is from the proceedings of this society.

ART. 229.—*Inversion of the Uterus occurring spontaneously eighty hours after Delivery.*

By Mr. CHARLES COWAN.

(*Edinburgh Medical Journal*, June, 1862.)

Some obstetricians believe that inversion of the uterus is always the result of some cause over which the attendant has control, and that in most cases it is caused by undue traction on the cord. Dr. Radford, however, has clearly established that it may occur spontaneously without any fault of the midwife's, and that it may occur not only immediately after delivery, but also after an interval of some days. Mr. Charles Cowan relates a case which is conclusive as to this point.

CASE.—A lady, forty years of age, always in the enjoyment of good health, was delivered with the forceps, after a pretty smart labour of twenty-four hours' duration, of her first child, a strong healthy boy, at 4 a.m., on Thursday the 15th November, 1861. The placenta was found in the vagina, ten minutes afterwards, and removed. In about half an hour there was slight hæmorrhage, which was easily restrained by the application of cold to the pubic region, which caused the uterus to contract firmly: a little brandy was likewise administered, as I attributed the hæmorrhage to the weak state of the patient, occasioned by the protracted labour, and by my efforts to accomplish delivery with the forceps, which occupied me more than half an hour.

I remained with her an hour longer; and to satisfy myself that all was right I removed the bandage, and, on manipulating the abdomen, I discovered the uterus firmly contracted, about the size of a cricket ball, in its

normal situation. The bandage having been replaced I administered a dose of morphia, and took my leave.

For the first three days after her confinement, we have the patient giving the most satisfactory evidence of speedily attaining convalescence. The pulse becomes natural; the appetite returns; the secretions are normal; the breasts are distended with milk, and the mother rejoices in the prospect of being able to nurse her child. Her sister finding her so well on the Saturday afternoon (two days and a half after delivery), returns home, and on the Sunday the patient expresses a wish to get up. What could be more gratifying than this! What could more strongly indicate a rapid restoration to health! So far it appears that all is well; but on Sunday at mid-day, about eighty hours after delivery, a change takes place. Eager to test her strength she leaps out of bed, comes to the ground with some degree of violence, staggers to the fireplace, and falls into a chair in a state of syncope.

There had undoubtedly been mischief, and that of no light character, for from this moment a train of symptoms of the most alarming description followed, becoming hourly more and more serious until the cause was discovered in the inversion of the uterus, and replacement was accomplished. She now again began to show some slight signs of amendment, and we cannot but conclude that the inversion was occasioned by the hurried leap out of bed, especially as the unfavourable symptoms presented themselves then for the first time; and we have further proof of this in the amelioration of these symptoms, commencing almost as soon as the displacement of the uterus was reduced.

ART. 230.—*On Five Cases of Vaginal Closure.*

By DR. J. BRAXTON HICKS, Assistant Obstetric Physician to Guy's Hospital, &c.

(*Lancet*, November 15, 1862.)

In this paper an account is given of five cases, in two of which there was complete atresia of the vagina, while in the remaining three almost complete closure was present, the result of former labours. In one of these there was almost complete retention of menses; in the other two labour was actually present.

CASE I.—There was congenital absence of vagina; external generative organs natural; recto-urethral membrane very thin; uterus distended to the size of the fist, and felt above the pubes. Excessive pain was experienced at each monthly period. As the recto-urethral septum was so thin that little probability existed of a successful operation for an artificial vagina, it was decided to puncture the uterus per rectum, which was satisfactorily accomplished (April 21st, 1861) by a curved trocar and canula. About four ounces of dark treacly fluid escaped, with immediate relief. The canula was withdrawn. About the same quantity escaped next day. No bad symptom followed. For some time she had no pain, nor any menstrual evacuation; but about seven months afterward, the pain having returned, it was found necessary to repeat the operation, which was done in the same manner, complete relief following. From that time she has continued to evacuate the menses per rectum without pain.

CASE II.—A married woman with complete atresia of the vagina, the uterus and probably the Fallopian tube being distended. As the recto-

urethral membrane was thick, an artificial vagina was formed close up to the uterus. When the completion of the operation was intended, the patient refused, and she left the hospital without the final step having been effected. She, however, did not suffer any bad symptom.

CASE III.—In this case, the vagina at its middle third was so nearly occluded that it was only by great pain and effort that the menses appeared; the aperture was found at the menstrual period, and then only by a very small stream of menstrual fluid. A slight opening was made at this point by the pointed bistoury, and a catheter passed through the constriction, which allowed the flow of the pent-up secretion. A few days after, the opening was enlarged so as to admit the middle finger, by dividing the cicatrices in many directions. A week after this, the advantage gained was still further increased, and the passage readily admitted two fingers together. The vagina was kept open by large bougies, and continued of the same size when last seen. Intercourse, almost impossible before, was attended with only a little inconvenience, and she had become pregnant and miscarried at the last accounts received.

CASE IV.—This was one of complete occlusion of the middle third of the vagina from former labour; the upper third being converted into a thick-walled sac containing four ounces of puriform fluid, and the lower third funnel-shaped. Pregnancy was advanced to the seventh month; labour pains had set in, with tenderness in the lower portion of the abdomen. Only a director could be passed part of the way through the constriction, which was enlarged by a guarded bistoury so as to admit the finger, which was used as a guide. The cicatrices were divided in numerous places by lightly drawing the point of the bistoury over them, till the thick membrane of the upper part was reached. A fine aperture was found, which was enlarged also, and the cavity entered by the finger. On withdrawing the finger the pus flowed away, and afterwards the membranes descended; after a time these were ruptured, the head being found to present. The vagina was still further dilated so as readily to admit two fingers, and the case left for Nature to complete. Pains fully set in in two days, and terminated successfully without further need of interference. The patient made a good recovery, and the vagina kept open afterwards.

CASE V.—There was occlusion of the middle third of the vagina (admitting only the passage of a catheter) by old cicatrices from former labour. The patient had been in hard labour for many hours, and was becoming exhausted; the head was impacted at the brim. The cicatrices were divided by a bistoury, in numerous directions, till at last three fingers were admitted. The death of the child having been ascertained, the head was perforated, and, after some trouble, was drawn through the brim. The head passed easily the former constriction of the vagina. Hæmorrhage ensued a little time after the birth; but the hand had no difficulty in passing through the vagina in order to control it. She was about in six days, and has since had a dead child without trouble.

In remarking upon these cases the author says it is a point upon which information is required, to ascertain the period during which the canula should remain in the uterus in puncturing by the rectum. In regard to the mode of incising the cicatrices, he prefers the method he has adopted—namely, making numerous rather than a few deep divisions, inasmuch as in the latter case the necessary expansion must come from the healthy tissues at their base, whereby a rent into the surrounding organs is more likely than when numerous incisions are employed not quite extending through the cicatrix.

ART. 231.—*Enormous Development of Hydatids in the Omentum Simulating an Ovarian Tumour.*

By Dr. W. NEWMAN, of Stamford.

(*British Medical Journal*, August 23, 1862.)

CASE.—A woman, aged 43, began to suffer from enlargement of the abdomen eleven years ago. In 1861, an incision was made in the right iliac region, when a quantity of pus and hydatids escaped. The opening closed, but the abdomen again enlarged; and the patient died in May, 1862, with symptoms of acute peritonitis. On examination, the omentum was found stretched over a mass of glistening cysts. Masses of hydatids were embedded on the surface of the right hepatic lobe. From them ran an unbroken chain of cysts right across the spinal column and down into the left iliac fossa. The right ovary, as well as the mesentery, also contained hydatids.

(C.) CONCERNING THE DISEASES OF INFANTS.

ART. 232.—*On the Causes of the Evils incident to Infant Dentition.*

By Mr. CLENDON, Dental-Surgeon to the Westminster Hospital, &c.

(*British Medical Journal*, July 12, 1862.)

Mr. Clendon is of opinion, and justly so as we believe, that the suffering and other evils of infant dentition do not arise from the resistance of the gum to the advancing tooth. The paper, which contains much interesting matter besides that which we quote, was read before a Medical Society, and this will account for the way in which some of the points are put forward:—

“Endeavouring, then, to view the question in all its bearings, we are led to consider:—

“1. That amidst the wonderful harmony and adaptation to their purpose of all the works of the great Author of our being, this alone could not have been left imperfect. In the inferior animals we do not find it so; those, for instance, most closely allied to ourselves, both in general development and in the structure and anatomical arrangement of the teeth, give no evidence of this sort of suffering and derangement. There seems to be little or none of it amongst savages; and we could not suppose that God had specially willed and ordained for the highest of His creatures, that they should undergo an inevitable operation on the very threshold of their existence, such risk and evil as fall to the lot of no others. God's plans are always wise and beneficent; it is man who mars what was created good.

“2. That while a large proportion of infants suffer so seriously and are subject to such dire diseases, as a result of dentition, in others there is only slight constitutional derangement; whilst in others, again, the same operation proceeds to its termination, unfelt and unnoticed, without any disturbance whatever.

“Passing from these general considerations to more particular ones, we observe,

“3. That the period of suffering is limited, being, as a rule, from

about the eighth to the eighteenth month, when dentition is not half completed.

"4. That the teeth erupted in that period are the smallest and sharpest of all; they could cut their way through gum tissue almost as well as a lancet, yet they come with so much difficulty: whereas at a later period—about the thirtieth month—the four largest of the twenty, temporary molars, pass through the gum quietly and unobserved.

"5. That again, at a later period, about the sixth year, the four first permanent molars, the largest of the adult teeth, advance also without pain or observation.

"6. That the roots of the twenty temporary teeth are absorbed, and the twenty permanent teeth come forward into their places without any trouble whatever.

"7. That the twelve large molar teeth, added on behind or beyond the original twenty, large and obtuse as their surfaces are, pass through the gums and assume their positions in the dental arch in the same quiet manner.

"8. That the gum is a tissue of low organisation, endowed with but a small degree of vitality and sensitiveness, as is proved in cases of premature loss of teeth, when the gums are frequently used for mastication in their stead, without suffering or inconvenience. And further, the gum is an elastic easily-yielding substance, totally incapable of resisting the pressure or advance of a sharp cutting edge; as is shown, when with artificial teeth there is any uneven pressure; in that case, the edge of the plate will cut or ulcerate through the gum, and rest on the bare maxillary bone, in the course of a few hours; again it is shown in the passage of pus (from periostitis) through the bone (alveolus) and through the gum, in gumboils, in twenty-four hours.

"There are different theories for the mode of advance of the tooth through the gum, by anticipation, by absorption, or by ulceration. Certainly the *necessity* for its advance is the addition of its root. In infant jaws the bodies or crowns of the teeth occupy the entire depth of the alveolar cavity; when, therefore, the ossification of the elongated pulp proceeds, and the root is adding on, the body must escape from the cavity through the gum, just in proportion to the increase of root; so that, whether it is the *vis naturæ*, ordinary development, or the *vis æ tergo*, the addition of root forcing the body onward, the tooth *must* advance, no resistance even of solid bone could possibly withstand it, how much less, then, could gum!

"These were some of my difficulties and objections with regard to the hitherto admitted theories. We have seen that the period of suffering is limited to about ten months, from the eighth to the eighteenth of the child's life; and it is manifest that Mr. Fox's mode of accounting for this limitation, viz., "that in infancy the animal frame is so delicate, that the least local irritation produces unusual sympathy," etc., cannot hold good, inasmuch as infant delicacy does not cease with the eighteenth month, neither do infants suffer more than adults from operations, injuries, &c. We have seen, too, that while all the later and blunter teeth make their way with no pain at

all, the great period of suffering coincides with the eruption of the sixteen small sharp temporary teeth, which would cut through anything. All these considerations made it clear to my mind that the suffering did not arise, as was supposed, from the pressure on and resistance of the gum; that we must therefore retrace our steps, and failing to find the satisfactory and sufficient cause of the mischief in the third or eruptive stage, must look for it in the second or saccular stage of development.

"Now, what is the condition, what are the contents of the maxillary bones, six months after birth, just when the first teeth are about to appear? We have in those hidden cavities forty-four bodies, perfect or in progress, organs destined to last for life. Here is before you a preparation of first and second dentition, containing forty-eight teeth, more than half of them of full adult size, packed away in every direction, like bees in a hive, all elbowing and pushing their way to obtain space. And we must remember that although, in the dry preparation, the tooth alone seems to fill the socket, leaving no room to spare, yet that in life each one, besides the pulp, has also its own proper covering, the dental sac with its external and internal coats, and an enamel organ with a considerable interspace; the sac, too, highly vascular, and sensitively endowed with branches of the trifacial nerve. Trace back this nerve to its source, to the pons varolii and the floor of the fourth ventricle, where it is in close proximity to the glosso-pharyngeal, pneumogastric, spinal accessory, and spinal nerves, and at once the whole train of evils—difficult breathing, immoderate diarrhœa, convulsions, squinting, effusions on the brain, and death—are easily accounted for.

"Imagine some forty or fifty of those highly-organized dental bodies, supplied with branches of this nerve, closely packed in the maxillary bones, and that any obstruction or arrest of their natural development should arise from the cramped position and want of space, and ask yourselves—Is not that much more likely to derange the whole economy, than the simple passage of a tooth through gum?

"To impress you more fully with the effects of the crowding of the teeth, in the maxillary bones, let me call your attention more particularly to one tooth, the first permanent molar, the largest tooth of adult age, as the one more likely to be the cause of evil than all the others, perhaps, together. At the period of suffering, the crown of this tooth is fully formed, and struggling into position in the dental arch. Here is one before me of its usual size; and here, also, are four of the same, lately removed from the jaws of a young child. Picture to yourselves four such monstrous teeth existing in the compressed arches of some children under twelve months old, whom we see, and can you be astonished at any amount of evil that ensues? To account for the subsidence of all unfavourable symptoms in the third year, we must remember that these teeth are then already in position, *under* the gum, the jaws are relieved of the presence of twenty teeth, and, to accommodate the remainder, the bones are also considerably enlarged.

"Reviewing the whole subject—bearing in mind the condition of the teeth and dental sacs, in relation to the maxillary bones—I come

to the conclusion that, when the development of the teeth, and the growth of the bones that contain them, proceed in relative proportion and in due order, there you have natural and harmless dentition. On the other hand, when the development of the teeth proceeds rapidly, and the jaw-bones are preternaturally small, then you have the train of evils so often referred to, commencing with simple diarrhœa, and terminating in death. That the maxillary arches often *are* preternaturally small, we have frequent evidences in the crowding together of the permanent teeth; in which cases we are compelled to remove some of them, to make room for the remainder.

"I am continually asked, 'But, if you reject the old views, how do you account for the relief which gum-lancing immediately affords? That it *does* so, can hardly be denied.' I do *not* deny it. I admit it fully. But, if the theory of the practice were true, it should result in the emancipation of the tooth, which it does not; it is only a palliative, as its highest advocates admit; the evil is in nowise cured, and will be sure to run its course. No doubt the blood-letting, and the incision itself, like any other counter-irritant, may afford temporary relief; though, perhaps, still greater might be obtained by the application of a leech or cupping-glass to any part of the inflamed gum, could such means be adopted in an infant's mouth. The lancing may do no harm, though of this I am by no means sure, but the principle involved in it is wrong; and it would be, indeed, an unworthy argument for a scientific man, that he does no harm, when, by seeking right principles and following them out, he might instead be doing a great amount of good.

"Finally, I may be asked—What, then, do you propose? That is quite another question, and a very wide one. At present, I propose nothing but that we should start fair; should disabuse our minds of wrong views, so as to admit right ones; should remove error from our path, in order to see the way to truth. My only wish, in fact, on this subject is, that we should strive to ascertain the real causes of the evils we have been discussing, in the hope that better knowledge, and more appropriate treatment, may be attended with happier results."

ART. 233.—*On the Value of the Expectant Treatment in the Pneumonia of Children.*

By M. BARTHEZ.

(*Bull. Gén. de Thérap.*, April 30, 1862; and *Medico-Chirurgical Rev.*, July, 1862).

In consequence of the mild nature of simple pneumonia, MM. Rilliet and Barthez, together with M. Legendre, have been in the habit of leaving the disease in many cases to its natural course. They believed that they would thus cure the patients as well as by active treatment, and the results have justified their expectations. From the month of August, 1854, to the month of June, 1861—that is to say, for about seven years—M. Barthez has treated in the hospital 212 children attacked with simple pneumonia, among whom he had only two deaths, and in these last both lungs were affected.

In half of these cases no active treatment was adopted; in many of the others only mild measures were recommended—such as an aperient, an emetic, and a bath; and about a sixth of the cases were subjected to somewhat active treatment. To this rather considerable number of cases, M. Barthez adds several more, which he has treated in private practice during the same period; so that he thinks he can determine the mildness of uncomplicated pneumonia in children so far as the city of Paris is concerned, whatever may be the seasons or the years, or the seat and extent of the disease, and whatever may be the treatment, whether active or insignificant, or none at all. He makes a reservation, however, for double pneumonia, which is the only form he has seen terminate in death in the proportion of 2 to 13. The patients particularly alluded to by M. Barthez were from two to fifteen years of age. Before this latter period simple hepatization is still more frequently cured, even when it is very extensive; but it has also been known to terminate in death. After fifteen years and up to twenty, M. Barthez also believes in the cure of the disease, so far as his recollection extends. On the other hand, the pneumonia described by him does not comprise all the inflammatory diseases of the lung, nor the pneumonia which supervenes during the course of fevers, nor that which accompanies tuberculosis.

The following are some of the general conclusions at which M. Barthez has arrived. Pneumonia, when left to itself, begins to terminate in resolution from the sixth to the eighth day from its commencement, and a slight course of treatment makes no difference in its progress. Bleeding appears to be contra-indicated in this disease, and M. Barthez has remarked that several children who had lost blood were pale and emaciated during the whole period of a long convalescence. When resolution has once commenced the disease is very rapidly terminated, and one day is sometimes sufficient for the purpose, but more generally it occupies between two and six days. The extent of the inflammation has a great influence upon the duration of the disease; thus, when it occupies the whole of the organ, its progress is the most slow and its duration is the longest. Also double pneumonia takes more time to become resolved than the simple form. The conclusion which seems to M. Barthez to follow from his cases is, that in a child attacked with simple lobular hepatization, the best course is to adopt good hygienic measures, and to abstain from all active treatment, and especially from the repeated abstraction of blood, the evident effect of which is to weaken the patients unnecessarily, and considerably to protract their convalescence.

ART. 234.—*On the Green Alvine Discharges of Infants.*

By M. BOUCHUT.

(*Gaz. Hebd. de Méd. et Chir.*, July 1, 1862.)

In some clinical remarks upon the jaundice of infants, suggested by a case then under treatment in the Children's Hospital at Paris,

M. Bouchut expresses an opinion that M. Billard is wrong in attributing the green alvine discharges generally met with in these cases to an alteration of the bile in the secreting organ. The green diarrhœa is really a sign of enteritis. The bile is only coloured green because it has been acted upon by the acid mucus of the intestine, which produces the same effect upon it as when the experiment is made of adding nitric acid. In the same way with infants at the breast who pass urine and fœces at the same time, the latter, after being exposed for a short time to the air, lose their normal colour and become green; a change which must be attributed, not to a pathological state, but simply to the natural acidity of the urine with which the fœces have become mingled.

ART. 235.—*Incarcerated Intus-susception in a Child successfully treated by Inflation.*

By MR. EDWARD COUSINS.

(*British Medical Journal*, June 21, 1862.)

CASE.—February 23, 1862, a.m.: A male child, aged thirteen months, at ten a.m., apparently in good health, after having had the breast, suddenly vomited all the contents of the stomach, including the undigested first meal of boiled bread, and immediately fell into deep syncope. Half an hour later it vomited a thin serous fluid, and relapsed into a semi-comatose state; surface generally pale, but rosy over scalp. The gums were lanced over two molar teeth which were approaching the surface. Castor-oil was given, and at once vomited. After this the child vomited immediately everything it took, and repeatedly vomited serous liquid when not recently fed; at last it refused food.

From one o'clock until the evening it had several fits of tormina every ten or fifteen minutes. During these its face was pallid, anxious, and distressed; it writhed, and pulled violently at its nose, ears, lips, and penis. The fits of tormina were not accompanied with tenesmus; they lasted two or three minutes, and were succeeded by semi-coma, during which the eyelids met imperfectly, and the child was vexed if disturbed. Sinapisms were applied. Enemata were retained for a time, and then escaped without fecal matter.

Five o'clock: The abdomen was flaccid, and not over-sensitive to pressure. The tormina were not accompanied with tenesmus or dejections. Examination *per anum* discovered nothing; but the finger, on being removed from the anus, was followed by some slightly bloody mucus. There were no febrile symptoms or thirst. A half-drachm of castor-oil had previously been given, with a minute portion of Dover's powder, and at once rejected. The absence of more marked symptoms of intestinal obstruction led to a momentary error in diagnosis; and hæmatoxylium with opium was prescribed. Aromatic spirits of ammonia, carbonate of soda, and brandy were given occasionally. A later examination, at seven p.m., exhibited increased prostration, absolute inappetency, shrunken face, cold extremities, finger-nails somewhat livid, pulse running small and frequent; fontanelle depressed, tormina frequent without tenesmus, no dejection. An elongated horizontal firm tumour was felt to form and harden under palpation in the region of the right half of the transverse colon, then vanish gradually and again become sensible, with contemporaneous indications of tormina; and a

firmer tumour, apparently disconnected from the former, existed in a direction vertically upwards above two and a-half inches from the right iliac region : this latter being persistent, not intermitting, in character. Brandy and water were given frequently. Considering that the symptoms established a diagnosis of intussusception, I at once had recourse to inflation of the bowel, before graver symptoms than those present should occur ; and, with the assistance of the relatives, was preparing to administer the insufflation *per rectum* by means of a stomach-pump, when Mr. Erichsen arrived, who had been summoned by the father of the child, and who at once entered into my view of the diagnosis and treatment, and gave me his valuable assistance.

The inflation was carried to such an extent as to require considerable pressure to retain the tube in the anus ; and, after allowing the escape of the air, little perceptible effect on the iliac tumour discovered as the result. A repetition of the trial caused a perceptible diminution in the length of the tumour ; and the transverse tumour ceased to be felt. The child seemed distressed by the distension, and strained slightly during the proceeding. A third repetition was conducted with great slowness, till the distension of the bowel should be complete, when a somewhat sudden stroke of the piston was followed by an audible movement of flatus in the small intestine and loss of the sense of resistance to the succeeding stroke. The syncope increased alarmingly. The stimulants were re-administered.

There now remained a tumour of somewhat less firmness in the iliac region, not more than half an inch in length, which a fourth injection failed to remove ; and, by reason of the syncope, our efforts were discontinued. A cautious prognosis was given, and the stimulants and Dover's powder were continued.

After we left the child, it slowly rallied ; never vomited ; slept several hours ; awoke and passed blood-stained mucus, and again at midnight, but was tranquil and eager for the breast, and gave no signs of pain or vomiting.

24th, one a.m. : The child passed a fæcal stool, nearly bloodless, but containing a seed of *Abrus peccatorius*, which was brought to me in the napkin, with the information that the child had voided a bead. The desire for food was increasing ; there had been neither vomiting nor tormina, syncope, nor blood. The child was cheerful, and even playful. Abdominal respiration was perfect. The abdomen was large, insensitive, and revealing no tumour on prolonged and very careful palpation. An ounce of almond oil was ordered, and a quarter of a grain of Dover's powder twice a day. 24th, six p.m. : The skin and pulse were healthy ; the appetite good. Previously, however, to my visit, the child had refused everything since one p.m., vomiting the milk ; he then sucked, and took a meal of barley-water afterwards. At half-past one p.m., he passed an acid curdled stool, not bloody ; no stool had been passed since. He had had fits of tormina three times since one o'clock. A very slight fit of tormina occurred during my visit, during which no hardness was discernible in the cæcal region ; but there was a distinct rigidity of all the transverse colon, which ceased after a time, when the child resumed a natural aspect, and would dance in the nurse's hands. 25th : There was continued improvement ; no vomiting. The child was playful at times, alternating with sleep. Some tenderness existed in the iliac region. Rigidity of the transverse colon was felt on careful and prolonged examination occasionally. There was absolute softness in the cæcal region. Four stools of discoloured mucus mixed with bile had been passed. He vomited once after taking the Dover's powder. 26th : The improvement continued. The child passed two stools decidedly bilious, and free from trace of blood to the eye. The abdomen was cool, free from

hardness or tenderness; the skin of the extremities fuller, mottled; appetite moderate; sleep free from distress, as heretofore. The child was convalescent.

ART. 236.—*Congenital Malformation of the Duodenum.*

By Dr. H. WALLMANN.

(*Schmidt's Jahrbücher*, No. 6. 1862.)

CASE.—A new-born, feeble infant was observed to vomit everything, and on the second day after birth to become jaundiced, with the belly very tender on pressure. It sank on the fifth day, with symptoms of peritonitis. On post-mortem examination, the foramen ovale and ductus arteriosus were found still pervious. Liver large, as also the spleen. Stomach placed obliquely, distended; pylorus strongly contracted; beyond this the duodenum was dilated, as far as the opening of the ductus choledochus, like a stomach. At the latter point its diameter was contracted to the calibre of a needle; the point of the duodenum beyond this was of ordinary size and appearance generally. The pancreatic duct and the choledochus opened quite in the ordinary way, above the obstruction which appeared to be caused simply by a duplicature of the mucous membrane, forming a sort of valve. The contents of the stomach showed that but little could have passed the duodenal obstruction; the icterus was caused by the pressure of the dilated portion of the duodenum on the ductus choledochus. Wallman has found no similar case to this recorded anywhere.

ART. 237.—*On the Treatment of Imperforate Anus.*

By M. GUERSANT, Surgeon to the Hôpital des Enfants.

(*Gaz. Hebdomadaire de Méd. et Chir.*, June 24, 1862.)

After ascertaining the degree of protrusion at the perineum, the surgeon, if the infant is of the male sex, removes the contents of the bladder, and leaves the catheter in the urethra, in order to use it for the purpose of separating the urinary reservoir from the rectum. In little girls the urine should also be drawn off, and the catheter inserted into the vagina, in order to increase the distance between the intestine and uterus, which is thus raised in the direction of the symphysis pubis. These preliminary measures having been completed, the actual operation should be proceeded with, and a small grooved trocar, incurvated so as to correspond with the concavity of the sacrum, should be inserted in front of the os coccygis, along the curvilinear course of the bones. When the intestine is supposed to have been reached, the blade is withdrawn, and if meconium escapes through the canula, a rod, bearing a screw at its distal extremity, is adapted to the latter. The rod and canula, thus connected, form a convenient conductor in case further incision be required, or may be used for the purpose of placing an India-rubber tube in the rectum.

This procedure enables the surgeon, if he thinks fit, to introduce, after the removal of the canula, an instrument which Messrs. Bonafont and Guersant have both been long in the habit of using to stretch the foreskin in the operation of phymosis, in order to grasp

and draw down the extremity of the intestine, in case it should be desirable to secure it, after careful dissection, to the skin. The enlargement of the aperture made by the trocar, should be proceeded with as follows:—The knife should be passed along the groove existing on the concavity of the trocar, which can readily be turned to the sides or back. Finally, the operator should be provided with a small syringe, fitting into the canula; an injection can thus be made, and the inspissated meconium diluted in such a manner as to allow of its free egress. This injection should never be attempted without the assistance of the canula, because, as M. Richet remarked, the fluid might otherwise pass into the cellular structures of the pelvis.

M. Guersant tells us that he has often operated in this manner with the most complete success. When the puncture has thus been performed, it is much easier to dissect the rectum and bring it down so as to fix it to the skin and prevent contraction. The freedom of the orifice should be further ensured by the daily introduction of the little finger, a proceeding of obvious utility.

ART. 238.—*Case of Intra-Uterine Convulsions.*

By Dr. M'LEOD, of Kilmarnock.

(*Edin. Med. Journal*, Nov., 1862.)

CASE.—Mrs. D., æt. thirty-three, stout-made healthy woman, was taken in labour for the fourth time, on the 15th February, 1861, about 10 a.m. When I saw her on the afternoon of that day, I was told she had been four hours ill, and that the pains were coming on so quick that she expected the child would be born before I could reach her house. On examination per vaginam, I found the os uteri fully dilated; the head presenting in the first position, and resting on the perinæum. Severe pressing pains came on every ten minutes, having little or no effect in protruding the head through the maternal parts. Her previous labours were natural and easy. I may here mention that I attended Mrs. D. during her three previous confinements, and on one of these occasions she gave birth to twins. They are all living and healthy. As I could not account for the cause of delay, I introduced my finger as far as I could all round the head of the child, but could not find any obstacle to its passage. After waiting for about an hour and a half, a severe pain expelled the head, and it now became evident, from the bent position of the right arm, that it was the cause of protracting the labour.

The child (a male) when born was of the usual size and at the full time. It was so rigidly contracted in all its limbs that the operation of washing could with difficulty be performed; indeed it was impossible, by the application of any reasonable force, to extend either the arms or legs. The hands were clenched, with the thumbs turned in upon the palms. It was never able to swallow or suck, from the locked condition of the jaws. When stirred or moved in any way the whole body became spasmodically contracted and bent backwards. It took fits regularly every hour or oftener, but more particularly when touched. It never cried, but whined more or less till the time of its death, which took place during a fit on the Sunday week following its birth, at 10 o'clock at night. The bowels were moved several times, but little or no urine was passed after the first day. I regret not having had an

opportunity of inspecting the body after death, which was prevented by my having more pressing duties to attend to at the time.

The mother felt certain from the sudden and violent movements of the child, for about six weeks previous to birth, that there was something unusually wrong. She described these movements to be so painful at times as almost to make her cry out. They continued generally for about an hour, when they gradually subsided, recurring frequently during both day and night.

The only treatment followed was putting the child occasionally in a warm bath ; rubbing in a liniment composed of chloroform and camphorated oil along the spine. An effort was made to support its strength by nutritive enemata, but every attempt failed by bringing on a paroxysm of convulsion.

INDEX TO VOL. XXXVI.

	PAGE
Abdominal wall for rupture of the bladder, case of section of the	285
Aconite used successfully in a case of intense neuralgia	78
ADAMS, case of dislocation of the head of the femur into the obturator foramen, &c.	291
„ on the treatment of lateral curvature of the spine	256
ADAMSON, on the use of arsenic and sesquicarbonate of ammonia in ague	41
Ague, on the use of arsenic and sesquicarbonate of ammonia in	41
ALBERS, on parenchymatous infarction of the brain in insanity	65
„ on the temperature of the surface (especially of the head) in the insane	66
Amaurosis consequent upon acute "abscess" of the antrum	217
„ with coloured vision, cases of reflex	218
Amputations in the hospitals of Paris, statistics of	197
Amputation, on union by first intention, of the	204
Aneurism of the palmar arch treated by chloride of zinc	289
„ cured by flexion, case of popliteal	292
„ of the gastric artery	135
Anæmia of drunkards, on the acute	40
Anæsthesia from cold in the severer operations, on	205
Anæsthetic, on carbonic acid as an	205
Angina pectoris, on the influence of tobacco in producing	126
„ on the pathology of	124
ANNANDALE, on excision of some of the smaller joints	195
ANSIAUX, on the use of metal sutures in operations for hare-lip	237
Anus, on the treatment of imperforate	358
Apoplexy, on heat	62
ARNOTT, on anæsthesia from cold in the severer operations	205
Arteries, on iron-wire ligatures for	201
Arterial murmurs in incipient phthisis, on	104
Artery, case of ligature of the subclavian	251
Asthma produced by pressure on the superior vena cava, case of	115
Atropine paper for ophthalmic purposes, on the use of	230
Auscultation of the head, clinical researches on	88
AVEZARD, remarks on beriberi	59
BAIZEAU, on epidemic night-blindness	225
BAKER, contribution to the pathology of cancer	178
BALFOUR, a new cause of death under chloroform	207
BARNES, on a method of inducing premature labour at a given hour	296

	PAGE
BARNES, on the obstetric bag	300
BARTHEZ, on the value of the expectant treatment in the pneumonia of children	354
Bathing, rules for sea-	6
BEALE, on certain points in the pathology of the liver	141
BEAU, on tobacco smoking as producing angina pectoris	126
BEDFORD, on the principles and practice of obstetrics	296
BEGBIE, on the connexion of lead impreguation with gout and rheumatism	43
BÉHIER, on the treatment of peritonitis by the continued application of cold to the abdomen	131
Beriberi, remarks on	59
BERNARDINO, on enucleation of the tonsils with the finger	240
BICKERSTETH, exfoliation of parts of the body, &c., of cervical vertebra	249
BILLROTH, on a peculiar gelatinous degeneration of the cerebellar membranes	84
BIRD, on the diagnosis by the laryngoscope of certain cases simulating early phthisis	102
BLACHEZ, on sudden death in connexion with chronic pleurisy	115
Bladder, removal of a piece of catheter from the female	286
„ case of section of the abdominal wall for rupture of the	285
Blennorrhœa of the male urethra, on an undescribed variety of	285
Blindness, on epidemic night-	225
Boils and carbuncles, on the subcutaneous treatment of	168
BOUCHUT, on the use of raw meat in obstinate diarrhœa	137
BOUCHUT, on the green alvine discharges of infants	355
BOWMAN, on glaucoma and its treatment by iridectomy	209
BRADY, on glycerole of tar in certain skin affections	167
Brain in insanity, on parenchymatous infarction of the	65
BRANDT, on Madeira and its climates	15
Breast, on the employment of compression in tumours of the	254
BROCA, on the employment of compression in tumours of the breast	254
BRODHURST, on old dislocations and their reduction	195
BROWN, on the operation for vesico-vaginal fistula	341
BROWN-SÉQUARD, recovery after apoplexy of the pons varolii	64
„ case of wound of the spinal cord	94
BROWNE, on bullet-wound exploration	186
BRYANT, an analysis of 230 cases of lithotomy	279
BUCHANAN, removal of a piece of catheter from the female bladder	286
„ on lithotomy in the female by the lateral method	282
BUDD, on the occurrence of malignant pustule in England	36
BUDGE, on dilatation of stricture of the urethra by a new instrument	283
CABANELLAS, on the treatment of puerperal fever by quinine	315
Cancer, on	178
Cancer and tubercle, on the co-existence of	45
Cataract by frequent evacuation of the aqueous humour, on the treat- ment of	220
Carbuncles and boils, on the subcutaneous treatment of	168
CASTELAIN, on hypertrophy of the walls of the stomach	137
CASTELLA, case of a rib fractured by a sneeze	256
Cataract, on the operation for the solution of	222
CAUSSIN, case of dislocation of the ulna forwards without fracture of the olecranon	287

INDEX.

363

	PAGE
Cerebellar membranes, &c., a peculiar gelatinous degeneration of the .	84
Cerebellum, with muscular rigidity, case of abscess in the . . .	82
„ on diseases of the . . .	84
CHALK, on the treatment of obstructed lachrymal duct . . .	229
CHAMBERS, on the treatment of acute rheumatism . . .	34
Chancre from syphilis, on the distinction of . . .	191
CHASSAIGNAC, on the treatment of fistula in ano in phthisical persons .	270
Chloroform, on recent death under . . .	207
„ a new cause of death under . . .	207
CLARK, on heat-apoplexy . . .	62
CLENDON, on the evils incidental to infant dentition . . .	351
COLLIS, on operations for the cure of varicocele and varicose veins .	293
COOPER, a remark on hay-fever . . .	51
„ on obstructed duct and epiphora . . .	228
Constipation, on . . .	138
Convulsions, case of intra-uterine . . .	359
CORNISH, on the prevalence of typhoid fever in India . . .	26
CORRIGAN, a remedy for sea-sickness . . .	136
COTTON, on the action of the excreta of serpents in certain chest affections . . .	116
COUSINS, incarcerated intus-susception in a child, treated by inflation .	356
COWAN, inversion of the uterus occurring spontaneously eighty hours after delivery . . .	348
Croup and diphtheria, on the connexion between . . .	39
Croup, oxygen gas in the treatment of threatened asphyxia in . .	101
DANET, very obstinate hiccough cured by valerianate of zinc . . .	78
DAUVERGNE, a pomade to prevent the fall of the hair . . .	166
DÉBOUT, on vaginismus . . .	330
Delirium-tremens successfully treated by the iced bath . . .	61
DE MÉRIC, on gonorrhœal ovaritis . . .	326
Dentition, on the evils incident to infant . . .	351
Diabetes mellitus, treated by the administration of sugar . . .	146, 149
Diarrhœa, on the use of raw meat in obstinate . . .	137
DICKENSON, on the treatment of acute rheumatism, with reference to heart-complication . . .	32
DICKSON, on the means of protection from small-pox . . .	10
Diphtheria and croup, on the connexion between . . .	39
Disease and vice, on . . .	8
Dislocations and their reduction, on old . . .	195
DONALDSON, case of aneurism of the gastric artery . . .	135
DUMENEL, on the acute anæmia of drunkards . . .	40
DUNCAN, on diphtheritic inflammation of the procident uterus and vagina . . .	334
DUNCAN, on the internal surface of the uterus after delivery . .	316
Duodenum, congenital malformation of the . . .	358
DUTROULEAU, rules for sea-bathing . . .	6
DUTT, a case of chylous urine successfully treated with iron . .	149
Dysentery, on the good effect of charcoal injections in . . .	137
Dyspepsia, on . . .	134
Ear-ache, on the treatment of . . .	245
Ear during life, on necrosis and extrusion of the cochlea and vestibule of the . . .	246
„ remarks on injections into the middle . . .	240

	PAGE
Ectropion, a new operation for	224
Eczema, on	158
EISENBRODT, on the diagnosis of partial palsies of sensation	80
ECHO, on systematized gymnastic training for the masses	1
ELLIS, on injections in the treatment of uterine diseases	346
Embolia from fluid fat as a cause of pyæmia, capillary	127
„ in accessible arteries, proposed operation for the removal of	192
„ of the arteria centralis retinæ	223
Embolism of the superior mesenteric artery causing hæmorrhage from and gangrene of the intestine	140
Empyema resulting in the escape of hydatids of the liver into the pleura	120
Epilepsy, &c., on the use of galium album in	72
Epiphora and obstructed duct, on	228, 229
Epistaxis checked by increasing the frequency of the respiratory movements	234
Erysipelæ, a fact as to the contagiousness of	155
Eustachian tube, on the difficulty and danger of catheterism of the	243
EVANS, on a new fracture apparatus	200
Exomphalos in the adult, on the radical cure of	260
Eye-ball, on sympathetic inflammation of the	214
Eye from the bite of a leech, loss of an	228
FARGE, ossification of the trachea from prolonged pressure of the tube after tracheotomy	250
Fecundity, cases of extraordinary	321
Femur, into the obturator foramen, &c., case of dislocation of the head of the	291
FERGUSON, a new operation for lithotomy	282
Fever, a remark on Hay-	51
„ and measles, an effectual remedy for scarlet	29
„ as it prevailed in certain of H.M.'s ships at Halifax, on Yellow	27
„ at Over-Darwen, history of an outbreak of	23
„ by quinine, on the treatment of puerperal	315
„ dependent upon the use of impure water, an epidemic of typhoid	25
„ in India, on the prevalence of typhoid	26
„ on the connexion between typhus and typhoid fever	20
„ on the disinfecting treatment of	17
„ on the etiology of typhoid	21
„ on the specific distinctions of typhus and typhoid	17
„ on the temperature, urea, chloride of sodium, &c., in scarlet	29
„ on the use of nitric acid in intermittent	42
FINIZIO, on narrow pelvis	306
Fistula-in-ano, on	269, 271
FLINT, a report on pneumonia	95
Fluctuation, on deceptive	182
Fœtus, on the diagnosis of the sex of the	318
Food ? is the flesh of diseased animals unwholesome as human	13
FORSAETH, singular case of loss of hair	166
FOX, on the vessels concerned in the production of phlegmasia dolens	335
Fracture apparatus, a new	200
FRENCH, on the subcutaneous treatment of boils and carbuncles	168
FURNELL, a remarkable case of numerous cutaneous tumours	183
Galium album in epilepsy, &c., on the use of	72

	PAGE
GAMGEE, is the flesh of diseased animals unwholesome as human food?	13
Gangrene, on the use of baths of oxygen in senile	170
GASON, a case of restoration of an amputated nose	233
Glaucoma, and its treatment by iridectomy, on	209
„ in man, and periodic inflammation of the eyes in horses, on the analogy between	227
GNECCHI, case of tetanus treated by chloride of barium	72
GODEFROY, on the use of fucus vesiculosus in obesity	52
Gonorrhoeal ovaritis, on	326
GOODFELLOW, two cases of embolism	131
Gout and rheumatism, on the connexion of lead-impregnation with	43
GRAEFE, loss of an eye from the bite of a leech	226
GRACE, case of double uterus, with simultaneous gestation	318
Graves' Disease, on	48
GREEN, a case of enormous diverticulum of the bladder	153
GREENHOW, history of an outbreak of fever at Over-Darwen	23
GUERSANT, on the treatment of imperforate anus	358
GULL, empyema from the escape of hydatids of the liver into the pleura	120
GUYON, on the influence of changes of climate upon lepra	165
Gymnastic training for the masses, on systematized	1
HABERSHON, case of intense neuralgia relieved by aconite	78
Hair, a pommade to prevent the fall of the	166
„ singular case of loss of	166
HALDANE, on the co-existence of cancer and tubercle	45
HALLAHAN, on the mechanism of labour	302
HAMILTON, a new transfusion apparatus	198
HAMMOND, on the use of nitric acid in intermittent fever	42
HANBURY, case of hydatids of liver evacuated through the lungs	118
Hare-lip, new operation for	238
„ on the employment of metal sutures in the operation for	237
HARLEY, a case in which air was expelled from the vagina	343
HARPER, case of rupture of the vena cava inferior	266
HAUGHTON, cases of tetanus treated by nicotine	66
HAYDON, cases of syphilitic disease communicated in vaccination	12
Head, clinical researches on auscultation of the	88
Heart, on over-exertion of the arms as an exciting cause of disease of the	3
Hernia, a new operation for strangulated	268
„ on inversion of the body in the reduction of	267
Herpes, especially with reference to its connexion with affections of the nervous system	156
HEWITT, on hydatidiform ovum	344
Hiccough, cured by valerianate of zinc, very obstinate	78
HICKS, five cases of vaginal closure	349
HILDIGE, on the treatment of cataract by the frequent evacuation of the aqueous humour	220
HILLIER, on ringworm and vegetable parasites	163
„ on the connexion between diphtheria and croup	39
Hip-joint disease, on the treatment of	239
HIRTZ, on sterility in men	155
HJATLELIN, on the connexion between typhus and typhoid fever	20
„ on the disinfecting treatment of fever	17
Hoarseness, on the easy treatment of certain forms of	121
Hæmoptysis, on the diagnosis of	109

	PAGE
Hæmorrhage at the commencement of labour from hypertrophy, &c., of the os uteri	307
Hydatids of the liver evacuated through the lungs, &c., case of	118, 120
Hydrocephalus by iodide of potassium, on the treatment of chronic	85
HUGHES, on the saccharine treatment of diabetes mellitus	146
Infants, circumscribed tumefaction of the sterno-mastoid muscle in new-born	319
Insane, on the temperature of the surface (especially of the head) in the	66
Insanity, on parenchymatous infarction of the brain in	C5
Intus-susception in a child successfully treated by inflation, incarcerated	356
JACCOUD, on the treatment of certain forms of hoarseness	121
JACKSON, cases of reflex amaurosis with coloured vision	218
Joints, on excision of some of the smaller	195
JONES, on eczema	158
JORDAN, case of malignant pustule of the arm	287
KEY, protracted labour from hypertrophy of the foetal kidneys	309
Kidney per urethram, discharge of a portion of	152
Kidneys, protracted labour from hypertrophy of the foetal	309
,, the symptoms of atrophy of the	152
KIRKES, on arterial murmurs in incipient phthisis	104
Labour and pregnancy, case of unsuspected	317
,, at a given hour, on a new method of inducing premature	296
,, from hypertrophy of foetal kidneys, protracted	309
,, from hypertrophy, &c., of the os uteri, hæmorrhage at the commencement of	306
,, from occlusion of the os uteri, impracticable	310
,, on the mechanism of	302
,, undescribed cause of delay in	311
Lachrymal duct, on the treatment of chronic obstruction of	228, 229
LAMM, case of ovaritis	325
LAUGIER, on the use of baths of oxygen in the treatment of senile gangrene	170
LAPLAGNE, purulent puerperal peritonitis, caused by paracentesis	314
Laryngoscope in diagnosing certain cases simulating early phthisis, on the use of the	102
LAURENCE, a binocular ophthalmoscope	232
Lepra, on the influence of changes of climate upon	165
LETENNEUR, case of rupture of the pectoralis major muscle	255
LIEBREICH, embolia of the arteria centralis retinae	223
Lint, on oakum as a substitute for	202
Lip, a case of curious disease of the lower	237
LISTER, on the treatment of chronic hydrocephalus by iodide of potassium	85
Lithotomy, a new operation for	282
,, an analysis of 230 cases of	279
,, in the female by the lateral method, on	282
,, on the causes of death after	272
Liver evacuated through the lungs, case of hydatids of the	118
,, on certain points in the pathology of the	141

INDEX.

367

	PAGE
LYONS, on a peculiar disease of the nose and cranial sinuses	234
Madeira, and its climates	15
Malignant pustule in England, on the occurrence of	36
MARSTON, a report on syphilis, with reference to the more mixed and unusual forms of the primary symptoms	188
MATTEI, on impracticable labour from occlusion of the os uteri	310
MAUNIER, on popliteal aneurism cured by flexion	292
McCLINTOCK, on turning in cases of disproportion	305
MCLKOD, cas: of intra-uterine convulsions	359
MELCHIORI, circumscribed tumefaction of the sterno-mastoid muscle in new-born infants	319
METTENHEIMER, on the symptoms of atrophy of the kidneys	152
MICHEL, on the pathology of the pituitary body	93
MICHON, on vaginismus	330
MIQUEL, on the use of oxygen gas in the treatment of threatened asphyxia in croup	101
MONTGOMERY, cases of complete recovery after very severe incised wounds	185
MOORE, on the value of pulsation in the diagnosis of tumours	179
MORTON, on the treatment of varicose veins by a new instrument	193
Muscle, case of rupture of the pectoralis major	255
MYRTLE, hæmorrhage at the commencement of labour from hypertrophy, &c., of os uteri	307
NÉLATON, aneurism of the palmar arch, treated by chloride of zinc	289
„ on deceptive fluctuation	182
„ on the treatment of morbus coxæ	289
NELIGAN, on an unusual abnormal condition of the mucous membrane of the tongue and cheeks	132
Neuralgia relieved by tincture of aconite	78
NEWMAN, enormous development of hydatids in the omentum, simulating an ovarian tumour	351
Nipples, and a new nipple-shield, on the treatment of sore	345
NOEGGARATH, inversion of the uterus of thirteen years' standing reduced by a novel method	337
Nose and cranial sinuses, on a peculiar disease of the	234
Nose, restoration of an amputated	233
NUNNELLY, on iron-wire ligatures for arteries	201
Oakum as a substitute for lint, on	202
Obesity, on the use of fucus vesiculosus in	52
Obstetric bag, the	360
Obstetrics, on the principles and practice	296
OGLE, on the use of galium album in epilepsy, &c.	72
Ophthalmoscope, a binocular	232
Ovarian and uterine inflammation, &c., on	324
Ovarian tumour simulated by hydatids in the omentum	351
Ovariectomy in a pregnant woman	338
Ovaritis, case of	325
Ovaritis, on gonorrhœal	326
Ovum, on hydatidiform	344
OZANAM, on the use of carbonic acid as an anæsthetic	205

	PAGE
PACKARD, on a singular lesion of the urinary bladder	154
PAGENSTICHER, new operation for ectropion	224
PAGET, on operation in scirrhous of the breast	251
Palate, new knives for cleft	238
Palsies of sensation, especially of touch, on partial	80
PANCOAST, on a new operation for strangulated hernia	268
Paraplegia, on	80
PARCHET, on the acute anæmia of drunkards	40
Partridges, on poisonous	14
Parturition without pain, on	312
PEACOCK, on the specific distinctions of typhus and typhoid fevers	17
PELLIZARI, on the successful inoculation of syphilitic blood	57
Pelvis, on narrow	306
Percussion-thimble, on a	123
Peritonitis, by cold to the abdomen, on the treatment of	131
Pessaries, in the treatment of uterine diseases, on the use of medicated	347
PÉTREQUIN, on dyspepsia	134
Phlebitis, unconnected with pregnancy or the parturient state, on crural	128
Phlegmasia dolens, on the vessels concerned in the production of	335
Phthisis, on arterial murmurs in incipient	104
„ on the use of the laryngoscope in diagnosing certain cases simulating early	102
PIORRY, case of asthma produced by pressure on the superior vena cava	115
„ on the checking of epistaxis by increasing the frequency of the respiratory movement	234
Pituitary body, on the pathology of the	93
Pleurisy, on sudden death in connexion with chronic	115
Pleuritic effusions, viewed in relation to thoracentesis, on	113
Pneumonia of children, on the value of the expectant treatment in the report on	354
„	95
Pons varolii, recovery after apoplexy of the	64
POPHAM, case of abscess in the cerebellum, with muscular rigidity	82
Pregnancy and labour, case of unsuspected	317
PRIOU, on inversion of the body in the reduction of hernia	267
Puerperal diseases, illustrations of	314
„ fever by quinine, on the treatment of	315
„ peritonitis, caused by paracentesis, purulent	314
Pustula maligna, on the successful treatment of	171
Pustule in the arm, case of malignant	287
Pyæmia, capillary embolia from fluid fat as a cause of	127
RADCLIFFE, on a percussion-thimble	123
RANKING, on crural phlebitis, unconnected with pregnancy or the parturient state	128
RANKING, on the prevalence of typhoid fever in India	26
REYBARD, on the use of continued, or Glover's suture, in wounds of the abdomen and intestines	263
REDER, on the distinction of chancre from syphilis	191
Rheumatism and gout, on the connexion of lead-impregnation with	43
„ on the treatment of acute	32, 34
Rib fractured by a sneeze, case of	256

	PAGE
RIGODIN, on the treatment of saccharine diabetes by sugar	149
RINGER, on the temperature, urea, &c., in scarlet fever	29
Ringworm, and vegetable parasites, on	163
ROBERTS, the clinical method of quantitative sugar-testing in the urine	143
ROCHARD, on Cochín-China ulcer	294
ROGER, clinical researches upon auscultation of the head	88
ROKITANSKY, two cases of spontaneous rupture of the spleen	143
ROSE, on a new nipple-shield, &c.	345
ROUTE, on the treatment of malposition of the uterus	336
SALTER, amaurosis consequent upon acute "abcess" of the antrum	217
„ on the diagnoses of hæmoptysis	109
SANKIEWICZ, on the successful treatment of pustula maligna	171
SAYEE, on oakum as a substitute for lint	202
„ on the treatment of delirium tremens by the iced bath	61
Scirrhus of the breast, on operation in	251
Sedillot, a new operation for hare-lip	238
Serpents, in certain chest affections, on the effects of the excreta of	116
SHEARER, on diseases of the cerebellum	84
SHANN, on over-exertion of the arms as an exciting cause of disease of the heart	3
Sickness, a remedy for sea-	136
SIDEY, undescribed cause of delay in labour	311
SIMS, on vaginismus and its treatment	331
Skin affections, on glycerole of tar in certain	167
SLAYTER, on yellow fever as it prevailed in certain of H.M.'s Ships at Halifax	27
Small-pox, on the means of protection from	10
SMYLY, new knives for cleft-palate	238
SPAETH, statistics of twins	319
SPENCE, case in which a tracheotomy-tube dropped into the left bronchus	250
Spinal cord, case of a wound of the	94
Spine, on the treatment of lateral curvature of the	256
Spleen, two cases of spontaneous rupture of the	143
STEINBACH, on the diagnosis of the sex of the fœtus	318
Sterility in man	155
Stimulants in the American army, on the use of	5
Stomach, hypertrophy of the walls of the	137
Stools of infants, on the green	356
STREATFIELD, on the use of atropine-paper for ophthalmic purposes	230
SUCKLEY, on the use of stimulants in the American army	5
Sugar-testing in the urine, on the clinical method of quantitative	143
Syphilis, a report on	188
„ on the distinction of chancre from	191
„ on the hereditary transmission of tertiary	53
Syphilitic blood, on the successful inoculation of	57
„ disease communicated in vaccination, cases of	12
TANNER, a case of unsuspected pregnancy and labour	316
„ on the use of medicated pessaries in uterine diseases	347
Tar in certain skin affections, on glycerole of	167
TAYLOR, discharge of a portion of kidney per urethram	152
„ on poisonous partridges	14
Tetanus treated by nicotine, &c., cases of	66
„ treated by chloride of barium, case of	72

	PAGE
THOMAS, on paraplegia	80
THOMPSON, on the causes of death after lithotomy	272
Thoracentesis, on pleuritic effusions viewed in relation to	113
THORP, on pleuritic effusions viewed in relation to thoracentesis	113
TILT, on uterine and ovarian inflammation, &c.	324
Tobacco-smoking as a cause of angina pectoris	126
Tœnioids in man, two new	140
Tonsils with the finger, on the enucleation of	240
TORRELLI, case of ligature of the subclavian artery	251
TOWNLEY, on parturition without pain	312
TOYNBEE, on necrosis and extrusion of the cochlea and vestibule during life	246
Trachea, in consequence of the prolonged presence of the tube after tracheotomy, ossification of	250
Tracheotomy tube dropped into the left bronchus, case in which a	250
Transfusion apparatus, a new	198
„ successfully performed, case of	313
TRÉLAT, statistics of amputation in the Paris hospitals	197
TRIQUET, on the difficulties and dangers of catheterism of the Eustachian tube	243
„ remarks on injections into the middle ear	240
TROUSSEAU, on Graves' disease	48
„ on constipation	138
Tubercle and cancer, on the co-existence of	45
Tumours, a remarkable case of numerous cutaneous	183
„ on	171
„ on the value of pulsation in the diagnosis of	179
Turning, in cases of disproportion, on	304
Twins, statistics of	319
Typhus and typhoid fevers, on the specific distinction of	17
Ulcer, on Cochin-China	294
Ulna forwards, without fracture of the olecranon, case of dislocation of the	287
Urethra by a new instrument, on dilatation of stricture of the	283
„ on an undescribed variety of blennorrhœa of the male	285
Urinary bladder, enormous diverticulum of the	153
„ bladder, on a singular lesion of the	154
Urine successfully treated with iron, chylous	149
„ case of chylous	150
Uterine and ovarian inflammation, on	324
„ diseases, on injections in the treatment of	346
Uterus after delivery, on the internal surface of the	316
„ and vagina, on diphtheritic inflammation of the procident	334
„ inverted for thirteen years and reduced by a novel method	337
„ „ spontaneously eighty hours after delivery	348
„ on the treatment of the malpositions of the	336
„ with simultaneous gestation, case of double	318
Vaccination, cases of syphilitic disease communicated in	12
Vagina, a case in which air was expelled from the	343
Vaginal closure, on five cases of	349
Vaginismus and its treatment, on	330, 331

INDEX.

371

	PAGE
VAN BIERVLIET, on the analogy between glaucoma in man and periodic inflammation of the eye in horses	227
VAN ROOY, on the analogy between glaucoma in man and periodic inflammation of the eye in horses	237
Varicose veins and varicocele, on operations for the cure of	293
Veins and varicocele, on operations for the cure of varicose	293
Veins, by a new instrument, on the treatment of varicose	193
VELPEAU, on union by the first intention after amputation	204
Vena cava inferior, case of rupture of the	266
Vertebra, &c., exfoliation of part of the body of cervical	249
Vesico-vaginal fistula, on the operation for	340
Vice and disease, on	8
VON BÄRENSPRUNG, on herpes, especially with reference to its connexion with affections of the nervous system	158
WAGNER, capillary embolia from fluid fat as a cause of pyæmia	127
WALTON, on sympathetic inflammation of the eyeball	214
„ on the operation for the “solution” of cataract	222
WALTER, case of section of the abdominal wall for rupture of the bladder	285
WALLMAN, congenital malformation of the duodenum	358
WARD, on the etiology of typhoid fever	21
WARREN, a case of enormous diverticulum of the bladder	153
„ cases of extraordinary fecundity	321
WATSON, on the radical cure of exomphalos in the adult	260
WEBER, on the treatment of cut-and-thrust wounds of the intestinal canal	264
WEICHERT, case of transfusion successfully performed	313
WEINLAND, description of two new tænioids in man	140
WEST, illustrations of puerperal diseases	314
WILKS, on tumours or new growths	171
WILLIAMS, proposed operation for the removal of embolia in accessible arteries	192
WITT, an effectual remedy for scarlet fever and measles	29
Wound exploration, on bullet-	186
Wounds of the abdomen and intestines, on the use of the continued or Glover's suture in	263
„ of the intestinal canal, on the treatment of cut-and-thrust	264
„ recovery after very severe incised	185
ZANDYCK, a case of curious disease of the lower lip	237

